



SDMS Doc ID 2031048

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 9

IN THE MATTER OF:

MOTOROLA 52ND STREET SUPERFUND SITE

Arizona Public Service Company;
Pinnacle West Capital Corporation
505, 502, 501 South Second Avenue
Phoenix, AZ

U.S. EPA Docket No. 2004-25

RESPONDENTS

Proceeding Under Sections 104, 122(a),
and 122(d)(3) of the Comprehensive
Environmental Response, Compensation,
and Liability Act as amended
(42 U.S.C Sections 9604, 9622(a),
9622(d)(3)).

ADMINISTRATIVE ORDER ON CONSENT

FOR REMEDIAL INVESTIGATION/FEASIBILITY STUDY

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5 I. INTRODUCTION

6 1. This Administrative Order on Consent ("Consent Order") is entered into
7 voluntarily by the United States Environmental Protection Agency ("EPA") and Arizona Public
8 Service Company ("APS") and Pinnacle West Capital Corporation ("Pinnacle West")
9 (collectively "Respondents"). The Consent Order concerns the preparation and performance of,
10 and reimbursement for all costs incurred by EPA in connection with a Focused Remedial
11 Investigation and Feasibility Study ("Focused RI/FS") for the APS Site (the "Site," as hereinafter
12 defined), located within the third operable unit ("OU 3") of the Motorola 52nd Street Superfund
13 Site in Phoenix, Arizona.

14 II. JURISDICTION AND GENERAL PROVISIONS

15 2. This Consent Order is issued under the authority vested in the President of the
16 United States by Sections 104, 122(a) and 122(d)(3) of the Comprehensive Environmental
17 Response, Compensation, and Liability Act, as amended, 42 U.S.C. Sections 9604, 9622(a),
18 9622(d)(3) ("CERCLA"). This authority was delegated to the Administrator of EPA on January
19 23, 1987, by Executive Order 12580, 52 Fed. Reg. 2926, further delegated to Regional
20 Administrators on September 13, 1987, by EPA Delegation No. 14-14-c, and further redelegated
21 to Region IX Superfund Branch Chiefs by the Regional Administrator of Region IX on
22 September 25, 1997.

23 3. The Respondents agree to undertake all actions required by the terms and
24 conditions of this Consent Order. In any action by EPA or the United States to enforce the terms
25 of this Consent Order, Respondents consent to and agree not to contest the authority or
26 jurisdiction of the Superfund Branch Chief to issue or enforce this Consent Order, and agree not
27 to contest the validity of this Consent Order or its terms.
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5 4. In accordance with Sections 104(b)(2) and 122(j)(1) of CERCLA, 42 U.S.C.
6 §§ 9604(b)(2) and 9622(j)(1), EPA notified the Arizona Department of Environmental Quality,
7 Arizona Game and Fish Department, U.S. Department of Defense, U.S. Department of Interior,
8 National Oceanic and Atmospheric Administration, and U.S. Department of Agriculture on
9 September 3, 2003 and the U.S. Department of Energy on October 3, 2003 of negotiations with
10 potentially responsible parties regarding the release of hazardous substances that may have
11 resulted in injury to the natural resources under Federal and State trusteeship.

12 III. PARTIES BOUND

13 5. This Consent Order shall apply to and be binding upon EPA and shall be binding
14 upon the Respondents, their agents, successors, assigns, officers, directors and principals.
15 Respondents are responsible for carrying out all actions required of them by this Consent Order.
16 Each signatory to this Consent Order certifies that he/she is authorized to execute and legally
17 bind the party he/she represents to this Consent Order. No change in the ownership or corporate
18 status of the Respondents or of the Site shall alter Respondents' responsibilities under this
19 Consent Order.

20 6. Respondents are jointly and severally liable for carrying out all activities required
21 by this Consent Order. In the event of the insolvency or other failure of any one or more
22 Respondents to implement the requirements of this Consent Order, the remaining Respondents
23 shall complete all such requirements.

24 7. The Respondents shall provide a copy of this Consent Order to any subsequent
25 owners or successors of the Site before ownership rights or stock or assets in a corporate
26 acquisition are transferred. Respondents shall provide a copy of this Consent Order to all
27 contractors, laboratories, and consultants that are retained to conduct any work performed under
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4 this Consent Order, within 14 days after the effective date of this Consent Order or the date of
5 retaining their services, whichever is later. Notwithstanding the terms of any contract,
6 Respondents are responsible for compliance with this Consent Order and for ensuring that their
7 subsidiaries, employees, contractors, consultants, subcontractors, agents and attorneys comply
8 with this Consent Order.

9 IV. STATEMENT OF PURPOSE

10 8. In entering into this Consent Order, the objectives of EPA and the Respondents
11 are: (a) to determine the nature and extent of contamination and any threat to the public health,
12 welfare, or the environment caused by the release or threatened release of hazardous substances,
13 pollutants or contaminants at or from the Site, by conducting a remedial investigation; (b) to
14 determine and evaluate alternatives for remedial action (if any) to prevent, mitigate or otherwise
15 respond to or remedy any release or threatened release of hazardous substances, pollutants, or
16 contaminants at or from the Site, by conducting a feasibility study; and (c) to recover response
17 costs incurred by EPA with respect to the Site.

18 9. Since 1993, APS has been investigating sites located within Operable Unit 3 of the
19 Motorola 52nd Street Superfund Site that may have been adversely impacted by former
20 manufacturing gas plants ("MGPs"). APS and the Arizona Department of Environmental
21 Quality ("ADEQ") have entered into a voluntary remediation agreement that requires, in part,
22 APS to investigate and remediate MGP-related contaminants at these sites, which include but are
23 not limited to the Site that is the subject of this Consent Order. This Consent Order and the
24 attached Statement of Work are not intended to supercede, but rather to supplement, the work
25 required by the voluntary remediation agreement between APS and ADEQ. Consistent with this
26 intent, EPA agrees that this Consent Order and the attached Statement of Work require
27 Respondents to conduct work only with respect to the Contaminants of Concern, as identified in
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4 Attachment A of the Statement of Work. Respondents shall utilize, as agreed to by EPA, the
5 data from APS' MGP-related investigations in implementing the Focused RI/FS for the Site.

6 10. The activities conducted under this Consent Order are subject to approval by
7 EPA and shall provide all appropriate necessary information for the Focused RI/FS, and for a
8 record of decision that is consistent with CERCLA and the National Contingency Plan ("NCP"),
9 40 C.F.R. Part 300. The activities conducted under this Consent Order shall be conducted in
10 compliance with all applicable EPA guidance, policies, and procedures.

11 V. DEFINITIONS

12 11. Unless otherwise expressly provided herein, terms used in this Consent Order which
13 are defined in CERCLA or in regulations promulgated under CERCLA shall have the meaning
14 assigned to them in CERCLA or in such regulations. Whenever terms listed below are used in
15 this Consent Order or in the appendices attached hereto and incorporated hereunder, the
16 following definitions shall apply:

17 a. "CERCLA" shall mean the Comprehensive Environmental Response,
18 Compensation, and Liability Act of 1980, as amended, 42 U.S.C. §§ 9601, *et seq.*

19 b. "Consent Order" shall mean this Administrative Order on Consent, the
20 Statement of Work, all appendices attached hereto listed in Section XXX (Severability/
21 Integration/Appendices) and all documents incorporated by reference into this document
22 including without limitation EPA-approved submissions. EPA-approved submissions are
23 incorporated into and become a part of the Consent Order upon approval by EPA. In the event
24 of conflict between this Consent Order and any Appendix, this Consent Order shall control.

25 c. "Day" shall mean a calendar day. In computing any period of time under this
26 Consent Order, where the last day would fall on a Saturday, Sunday, or Federal holiday, the
27 period shall run until the close of business of the next working day.
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4 d. "Effective Date" shall be the effective date of this Consent Order as provided
5 in Section XXXII (Effective Date).

6 e. "EPA" shall mean the United States Environmental Protection Agency and any
7 successor departments or agencies of the United States.

8 f. "Future Response Costs" shall mean all costs, including, but not limited to,
9 direct and indirect costs, that the EPA incurs from July 1, 2004 forward in connection with the
10 Site in reviewing or developing plans, reports and other items pursuant to this Consent Order,
11 verifying the Work, or otherwise implementing, overseeing, or enforcing this Consent Order,
12 including but not limited to, payroll costs, contractor costs, travel costs, laboratory costs, the
13 costs incurred pursuant to Paragraph 50 (costs and attorneys fees and any monies paid to secure
14 access, including the amount of just compensation), Paragraph 31 (emergency response) and
15 Paragraph 82 (Work takeover).

16 g. "Interest" shall mean interest at the rate specified for interest on investments of
17 the EPA Hazardous Substance Superfund established by 26 U.S.C. § 9507, compounded
18 annually on October 1 of each year, in accordance with 42 U.S.C. § 9607(a). The applicable rate
19 of interest shall be the rate in effect at the time the interest accrues. The rate of interest is subject
20 to change on October 1 of each year.

21 h. "Motorola 52nd Street Superfund Site" shall mean Operable Units 1, 2, and 3 of
22 the Motorola 52nd Street Superfund Site, located within the approximate boundaries of 52nd Street
23 to the east, 7th Avenue to the west, McDowell Road to the north and Buckeye Road to the
24 southwest, and depicted generally on the map, attached as Appendix B.

25 i. "National Contingency Plan" or "NCP" shall mean the National Oil and
26 Hazardous Substances Pollution Contingency Plan promulgated pursuant to Section 105 of
27 CERCLA, 42 U.S.C. § 9605, codified at 40 C.F.R. Part 300, and any amendments thereto.

28 j. "Paragraph" shall mean a portion of this Consent Order identified by an Arabic

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4 numeral.

5 k. "Parties" shall mean EPA and Respondents.

6 l. "Past Response Costs" shall mean all costs, including, but not limited to, direct
7 and indirect costs, that the EPA paid in connection with the Site through June 30, 2004, plus
8 Interest on all such costs that may accrue .

9 m. "Respondents" shall mean Arizona Public Service Company and Pinnacle
10 West Capital Corporation.

11 n. "Section" shall mean a portion of this Consent Order identified by a Roman
12 numeral.

13 o. "Site" shall mean the APS facility, located at 505, 502, 501 South Second
14 Avenue in Phoenix, Arizona, within the Motorola 52nd Street Superfund Site and any other
15 facility owned or operated by Respondents that may be identified and investigated within OU3
16 during Respondents' conduct of the Work.

17 p. "Statement of Work" or "SOW" shall mean the Statement of Work for
18 development of a Focused RI/FS for the Site, as set forth in Appendix A to this Consent Order.
19 The Statement of Work is incorporated into this Consent Order and is an enforceable part of this
20 Consent Order as are any modifications made thereto in accordance with this Consent Order.

21 q "Waste Material" shall mean (1) any "hazardous substance" under Section
22 101(14) of CERCLA, 42 U.S.C. § 9601(14); (2) any pollutant or contaminant under Section
23 101(33) of CERCLA, 42 U.S.C. § 9601(33); and (3) any "solid waste" under Section 1004(27)
24 of RCRA, 42 U.S.C. § 6903(27).

25 r. "Work" shall mean all activities Respondents are required to perform under
26 this Consent Order and Statement of Work.
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5 VI. FINDINGS OF FACT

6 12. The Motorola 52nd Street Site is located in Phoenix, Arizona and was listed on the
7 EPA Superfund National Priorities List on October 4, 1989, pursuant to Section 105 of
8 CERCLA, 42 U.S.C. § 9605. Releases of hazardous substances, primarily volatile organic
9 compounds such as trichloroethylene ("TCE"), tetrachloroethylene ("PCE"), and trichloroethane
10 ("TCA"), from various facilities within the site boundaries have contributed to the groundwater
11 contamination at the Motorola 52nd Street Site. The response activities are conducted in three
operable unit study areas.

12 13. APS owns and operates a facility, located at 505, 502, 501 South Second Avenue,
13 Phoenix, Arizona ("Facility"), which is situated in the third operable unit study area of the
14 Motorola 52nd Street Site.

15 14. Since at least 1954, portions of the Site, specifically, the Facility, have been used
16 for electrical services, including a maintenance facility containing a vehicle repair garage, paint
17 and carpentry shops and other operation support functions.

18 15. The groundwater within operable unit three is contaminated with VOCs above the
19 Federal and State drinking water standards including TCE, PCE, and VOC degradation by-
20 products, cis-1,2-dichloroethylene and 1,1-dichloroethylene. TCA, as well as additional VOC
21 degradation by-products such as 1,1-dichloroethane, 1,2-dichloroethane, trans-1,2-
22 dichloroethylene, and vinyl chloride have also been detected.

23 16. The Facility used VOCs, including PCE, TCE, and TCA in the maintenance area.
24 Solvents and products containing solvents were used to clean and lubricate equipment, repair
25 tires, decal removal, brake cleaning, adhesion, and degreasing. In a 1992 soil gas survey, PCE
26 was detected in numerous soil gas samples. Subsequent soil sampling yielded PCE, TCE, and
27 TCA up to 44 mg/kg. A 1999 investigation reported TCE and PCE in soil gas samples and TCE,
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4 PCE, and 1,1-DCE, a PCE degradation product, in groundwater samples.

5 17. APS and Pinnacle West are each incorporated in Arizona and are doing business
6 in Phoenix, Arizona.

7 18. Respondents own or operate the Site and/or have previously owned or operated
8 the Site.

9 VII. CONCLUSIONS OF LAW AND DETERMINATIONS

10 19. The Site is a "facility" as defined in Section 101(9) of CERCLA, 42 U.S.C.
11 Section 9601(9).

12 20. TCE, TCA, and PCE found at the Site, as identified in the Findings of Fact above,
13 are "hazardous substances" as defined in Section 101(14) of CERCLA, 42 U.S.C. Section
14 9601(14), or constitute "any pollutant or contaminant" that may present an imminent and
15 substantial danger to public health or welfare under Section 104(a)(1) of CERCLA.

16 21. The presence of hazardous substances at the Site or the past, present or potential
17 migration of hazardous substances currently located at or emanating from the Site, constitute
18 actual and/or threatened "releases" as defined in Section 101(22) of CERCLA, 42 U.S.C. Section
19 9601(22).

20 22. Respondents are each a "person" as defined in Section 101(21) of CERCLA, 42
21 U.S.C. Section 9601(21).

22 23. Respondents are the owner and/or operator of the Facility, as defined by Section
23 101(20) of CERCLA, 42 U.S.C. §9601(20), and within the meaning of Section 107(a)(1) or (2)
24 of CERCLA, 42 U.S.C. §9607(a)(1) or (2) and are each a responsible party under Sections 104,
25 107 and 122 of CERCLA, 42 U.S.C. Sections 9604, 9607 and 9622.

26 24. The actions required by this Consent Order are necessary to protect the public
27 health or welfare or the environment, are in the public interest, 42 U.S.C. Section 9622(a), are
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4 consistent with CERCLA and the NCP, 42 U.S.C. Sections 9604(a)(1), 9622(a), and will
5 expedite effective remedial action and minimize litigation, 42 U.S.C. Section 9622(a).

6 **VIII. ORDER**

7 25. Based upon the foregoing Findings of Fact, Conclusions of Law, Determinations,
8 and the Administrative Record for this Site, it is hereby Ordered and Agreed that Respondents
9 shall comply with all provisions of this Consent Order, including, but not limited to, all
10 attachments to this Consent Order and all documents incorporated by reference into this Consent
11 Order.

13 **IX. WORK TO BE PERFORMED**

14 26. Selection of Contractors, Personnel. All work performed under this Consent
15 Order shall be under the direction and supervision of qualified personnel. Respondents shall
16 notify EPA in writing of the names, titles, and qualifications of the personnel, including
17 contractors, subcontractors, consultants and laboratories to be used in carrying out such work.
18 Respondents shall make such notification within thirty (30) days of the effective date of this
19 Consent Order and before work outlined below begins, for personnel identified prior to the
20 Effective Date. For all other personnel, Respondents shall make such notification within seven
21 (7) days after Respondents' selection of the contractor, subcontractor, consultant or laboratories.
22 With respect to any proposed contractor, the Respondent shall demonstrate that the proposed
23 contractor has a quality system which complies with ANSI/ASQC E4-1994, "Specifications and
24 Guidelines for Quality Systems for Environmental Data Collection and Environmental
25 Technology Programs," (American National Standard, January 5, 1995), by submitting a copy of
26 the proposed contractor's Quality Management Plan (QMP). The QMP should be prepared in
27 accordance with "EPA Requirements for Quality Management Plans (QA/R-2)," (EPA/240/B-
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01/002, March 2001) or equivalent documentation as determined by EPA.

4 27. Activities and Deliverables. Respondents shall conduct activities and submit
5 deliverables as provided by the attached Statement of Work, which is incorporated by reference,
6 and is binding upon Respondents. All such work shall be conducted in accordance with
7 CERCLA, the NCP, and EPA guidance including, but not limited to, the "Interim Final Guidance
8 for Conducting Remedial Investigations and Feasibility Studies under CERCLA" (OSWER
9 Directive # 9355.3-01), "Guidance for data Usability in Risk Assessment" (OSWER Directive
10 #9285.7-05) and guidance referenced therein, as well as guidance referenced in the Statement of
11 Work, as may be amended or modified by EPA. All work performed under the Consent Order
12 shall be in accordance with the schedules in the SOW, and in full accordance with the standards,
13 specifications, and other requirements of the Focused RI/FS Work Plan, Health and Safety Plan,
14 and Sampling and Analysis Plan, as initially approved or modified by EPA, and as may be
15 amended or modified by EPA from time to time.

16 28. Upon receipt of the draft Focused Feasibility Study Report, EPA will evaluate, as
17 necessary, the estimates of the risk to the public and environment that are expected to remain
18 after a particular remedial alternative has been completed. Respondents shall incorporate EPA's
19 evaluation and analysis into the final Focused Feasibility Study Report that is submitted to EPA
20 for review and approval.

21 29. EPA reserves the right to stop Respondents from proceeding further, either
22 temporarily or permanently, on any tasks, activity or deliverable required by this Consent Order.

23 30. Off-Site Shipment of Waste Material. Fourteen days prior to any off-site shipment
24 of hazardous substances in connection with the Work at the Site to an out-of-state waste
25 management facility, Respondents shall provide written notification to the appropriate state
26 environmental official in the receiving state and to EPA's Project Coordinator of such shipment
27 of hazardous substances. However, the notification of shipments shall not apply to any such
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4 off-site shipments when the total volume of such shipments will not exceed 10 cubic yards. The
5 notification shall be in writing, and shall include the following information, where available: (1)
6 the name and location of the facility to which the hazardous substances are to be shipped; (2)
7 the type and quantity of the hazardous substances to be shipped; (3) the expected schedule for
8 the shipment of the hazardous substances; and (4) the method of transportation. Respondents
9 shall notify the receiving state of major changes in the shipment plan, such as a decision to ship
10 the hazardous substances to another facility within the same state, or to a facility in another state.
11 Prior to shipping any hazardous substances, pollutants, or contaminants in connection with the
12 Work at the Site to an off-site location, Respondents shall obtain EPA's certification that the
13 proposed receiving facility is operating in compliance with the requirements of CERCLA
14 Section 121(d)(3), 42 U.S.C. §9621(d)(3), and 40 C.F.R. §300.440. Respondents shall only send
15 hazardous substances, pollutants or contaminants resulting from the Work at the Site to an off-
16 site facility that complies with the requirements of the statutory provision and regulation cited in
17 the preceding sentence.

18 31. Emergency Response and Notification of Releases. In the event that conditions
19 arising from or relating to the Work pose an immediate threat to human health or welfare or the
20 environment, Respondents shall immediately take all appropriate action. Respondents shall take
21 these actions in accordance with all applicable provisions of this Consent Order, including, but
22 not limited to, the Health and Safety Plan, in order to prevent, abate or minimize such release or
23 endangerment caused or threatened by the release. Respondents shall also immediately notify
24 the EPA Project Coordinator or, in the event of his/her unavailability, the Regional Duty Officer
25 at (415) 947-4400, of the incident or Site conditions. In the event that Respondents fail to take
26 appropriate response action and EPA takes such action instead, Respondents shall reimburse
27 EPA all costs of the response action not inconsistent with the NCP in the manner described in
28 Section XXI (Payment of Response Costs).

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4 32. In addition, in the event of any release of a hazardous substance from the Site in a
5 quantity equal to or greater than those determined pursuant to Section 102 of CERCLA, 42
6 U.S.C. § 9602, Respondents shall immediately notify the EPA Project Coordinator or Regional
7 Duty Officer at (415) 947-4400. Respondents shall submit a written report to EPA within 7
8 days after each release, setting forth the events that occurred and the measures taken or to be
9 taken to mitigate any release or endangerment caused or threatened by the release and to prevent
10 the reoccurrence of such a release. This reporting requirement is in addition to, and not in lieu
11 of, reporting under Section 103(a) of CERCLA, 42 U.S.C. § 9603(a), including reporting to the
12 National Response Center, and Section 304 of the Emergency Planning and Community Right-
13 To-Know Act of 1986, 42 U.S.C. § 11004, *et seq.*, including reporting requirements to state and
14 local emergency planning committees.

15 33. Focused Risk Assessment. Respondents will perform the Focused Risk
16 Assessment in accordance with the SOW, Focused RI/FS Work Plan and applicable EPA
17 guidance. The major components of the Focused Risk Assessment include contaminant
18 identification, exposure assessment, toxicity assessment, and human health and ecological risk
19 characterization.

20 **X. MODIFICATION OF THE FOCUSED RI/FS WORK PLAN**

21 34. If at any time during the Focused RI/FS process, Respondents identify a need for
22 additional data to complete the Work, Respondents shall submit a technical memorandum
23 documenting the need for additional data to the EPA Project Coordinator within 20 days of
24 identification. EPA in its discretion will determine whether the additional data will be collected
25 by Respondents and whether it will be incorporated into reports and deliverables. Nothing
26 contained herein shall prevent Respondents from collecting additional data at their own
27 discretion even upon determination by EPA that such data will not be incorporated into reports
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4 and deliverables required under the Consent Order and Statement of Work.

5 35. EPA may determine that in addition to tasks defined in the initially approved
6 Focused RI/FS Work Plan, other additional work may be necessary to accomplish the objectives
7 of the Focused RI/FS as set forth in the Statement of Work for this Focused RI/FS. EPA may
8 require that the Respondents perform these response actions in addition to those required by the
9 initially approved Focused RI/FS Work Plan, including any approved modifications, if it
10 determines that such actions are necessary for a complete Focused RI/FS. Respondents shall
11 confirm their willingness to perform the additional work in writing to the EPA within 14 days of
12 receipt of the EPA request or Respondents shall invoke dispute resolution. Subject to EPA
13 resolution of any dispute, Respondents shall implement the additional tasks that EPA determines
14 are necessary. Respondents shall complete the additional work according to the standards,
15 specifications, and schedule set forth or approved by EPA in a written modification to the
16 Focused RI/FS Work Plan or written work plan supplement. EPA reserves the right to conduct
17 the work itself at any point, to seek reimbursement from Respondents, and/or to seek any other
18 appropriate relief. Nothing in this Paragraph shall be construed to limit EPA's authority to
19 require performance of further response actions at the Site.

20 36. In the event of unanticipated or changed circumstances at the Site that may
21 reasonably warrant changes in the Focused RI/FS Work Plan, Respondents shall notify the EPA
22 Project Coordinator by telephone within 24 hours of discovery of the unanticipated or changed
23 circumstances. In addition to the authorities in the NCP, in the event that EPA determines that
24 the unanticipated or changed circumstances do warrant changes in the Work, EPA shall notify
25 Respondents and request that they modify or amend the Work Plan in writing accordingly and
26 submit the Work Plan for EPA approval. Respondents shall perform the work plan as modified
27 or amended, as approved by EPA.
28

4 **XI. EPA APPROVAL OF PLANS AND OTHER SUBMISSIONS**

5 37. After review of any plan, report or other item that is required to be submitted for
6 approval pursuant to this Consent Order, EPA shall: (a) approve, in whole or in part, the
7 submission; (b) approve the submission upon specified conditions; (c) modify the submission to
8 cure the deficiencies; (d) disapprove, in whole or in part, the submission, directing that
9 Respondents modify the submission; or (e) any combination of the above. However, EPA shall
10 not modify a submission without first providing Respondents at least one notice of deficiency
11 and an opportunity to cure within 21 days, except where to do so would cause serious disruption
12 to the Work or where previous submission(s) have been disapproved due to material defects and
13 the deficiencies in the submission under consideration indicate a bad faith lack of effort to
14 submit an acceptable deliverable.

15 38. In the event of approval, approval upon conditions, or modification by EPA,
16 Respondents shall proceed to take any action required by the plan, report or other item, as
17 approved or modified by EPA, subject only to Respondents' right to invoke the Dispute
18 Resolution procedures set forth in Section XVIII (Dispute Resolution) with respect to the
19 modifications or conditions made by EPA. In the event that EPA modifies the submission to
20 cure the deficiencies because the submission has a material defect, EPA retains the right to seek
21 stipulated penalties, as provided in Section XIX (Stipulated Penalties). EPA also retains the
22 right to perform its own studies, complete the Focused RI/FS (or any portion thereof) under
23 CERCLA and the NCP, and seek reimbursement from Respondents for its costs; and/or seek any
24 other appropriate relief.

25 39. Resubmission of Plans.

26 a. Upon receipt of a notice of disapproval, Respondents shall, within 21 days or such
27 longer time as specified by EPA in such notice, correct the deficiencies and resubmit the plan,
28 report, or other item for approval.

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4 b. Notwithstanding the receipt of a notice of disapproval, Respondents shall proceed, at
5 the direction of EPA, to take any action required by any non-deficient portion of the submission.
6 Implementation of any non-deficient portion of a submission shall not relieve Respondents of
7 any liability for stipulated penalties under Section XIX (Stipulated Penalties).

8 c. In the event that a resubmitted plan, report or other item, or portion thereof, is
9 disapproved by EPA, EPA may again require Respondents to correct the deficiencies, in
10 accordance with the preceding Paragraphs. EPA also retains the right to modify or develop the
11 plan, report or other item. Respondents shall implement any such plan, report, or item as
12 modified or developed by EPA, subject only to their right to invoke the procedures set forth in
13 Section XVIII (Dispute Resolution).

14 d. If upon resubmission, a plan, report, or item is disapproved or modified by EPA due to
15 a material defect, Respondents shall be deemed to have failed to submit such plan, report, or item
16 timely and adequately unless Respondents invoke the dispute resolution procedures set forth in
17 Section XVIII (Dispute Resolution) and EPA's action is overturned pursuant to that Section.
18 The provisions of Section XVIII (Dispute Resolution) and Section XIX (Stipulated Penalties)
19 shall govern the implementation of the Work and accrual and payment of any stipulated penalties
20 during Dispute Resolution. If EPA's disapproval or modification is upheld, stipulated penalties
21 shall accrue for such violation from the date on which the initial submission was originally
22 required, as provided in Section XIX (Stipulated Penalties).

23 40. In the event that EPA takes over some of the tasks, but not the preparation of the
24 Focused RI/FS, Respondents shall incorporate and integrate information supplied by EPA into
25 the final Focused Remedial Investigation and Focused Feasibility Study Reports.

26 41. All plans, reports, and other items required to be submitted to EPA under this
27 Consent Order shall, upon approval or modification by EPA, be enforceable under this Consent
28 Order. In the event EPA approves or modifies a portion of a plan, report, or other item required

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4 to be submitted to EPA under this Consent Order, the approved or modified portion shall be
5 enforceable under this Consent Order.

6 **XII. QUALITY ASSURANCE**

7 42. Respondents shall assure that Work performed, samples taken and analyses
8 conducted conform to the requirements of the SOW, the QAPP and guidances identified therein.
9 Respondents will assure that field personnel used by Respondents are properly trained in the use
10 of field equipment and in chain of custody procedures. Respondents shall only use laboratories
11 that have a documented quality system that complies with "EPA Requirements for Quality
12 Management Plans (QA/R-2)" (EPA/240/B-01/002, March 2001) or equivalent documentation
13 as determined by EPA.

14 **XIII. PROGRESS REPORTS AND MEETINGS**

15 43. Respondents shall make presentations at, and participate in, meetings at the request
16 of EPA during the initiation, conduct, and completion of the Focused RI/FS.

17 44. Respondents shall provide to EPA monthly progress reports on the fifth business
18 day of each month for the preceding month's work. After Respondents provide Notification of
19 Initiation of Fieldwork as required by SOW Section 4.1, and continuing until Respondents
20 provide Notification of Completion of Fieldwork as required by SOW Section 4.1, Respondents
21 shall provide to EPA weekly progress reports on Thursday of each week. At a minimum, with
22 respect to the preceding reporting period, these progress reports shall (1) describe the actions
23 which have been taken to comply with this Consent Order during that month or week, (2) include
24 all results of sampling and tests and all other data received by the Respondents, (3) describe
25 work planned for the next two months or two weeks with schedules relating such work to the
26 overall project schedule for Focused RI/FS completion, and (4) describe all problems
27
28

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4 encountered and any anticipated problems, any actual or anticipated delays, and solutions
5 developed and implemented to address any actual or anticipated problems or delays.

6 Respondents may submit weekly and monthly progress reports electronically. Respondents shall
7 submit weekly and monthly progress reports in hard copy upon request by EPA's Project
8 Coordinator. Respondents shall notify EPA's Project Coordinator within one day of all changes
9 to any schedule included in a weekly report. While conducting fieldwork, Respondents shall use
10 best efforts to provide daily updates to EPA's Project Coordinator. These updates may be
11 submitted electronically. Daily updates are not subject to stipulated penalties as described in
12 Section XIX (Stipulated Penalties).

13 **XIV. SAMPLING, ACCESS, AND DATA AVAILABILITY/ADMISSIBILITY**

14 45. All results of sampling, tests, modeling or other data generated by Respondents, or
15 on Respondents' behalf, during implementation of this Consent Order, shall be submitted to EPA
16 in the subsequent progress report as described in Section XIII of this Consent Order (Progress
17 Reports and Meetings). To comply with the requirements of this Paragraph, Respondents shall
18 submit the final laboratory reports and final data validation reports for all sampling data.

19 46. Respondents will notify EPA in writing at least 14 days prior to conducting
20 significant field sampling events as described in the Statement of Work, Focused Remedial
21 Investigation Work Plan or Sampling and Analysis Plan. At EPA's verbal or written request, or
22 the request of EPA's oversight assistant, Respondents shall allow split or duplicate samples to be
23 taken by EPA (and its authorized representatives) of any samples collected by the Respondents
24 in implementing this Consent Order. All split samples of Respondents shall be analyzed by the
25 methods identified in the QAPP.

26 47. Respondents have security policies and health and safety policies that affect access
27 at the Site. Respondents will incorporate the relevant policies into their Health and Safety Plan.
28

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4 Consistent with the Health and Safety Plan, EPA and its authorized representatives shall have the
5 authority to enter and move about all property at the Site and off-site areas where Work, if any,
6 is being performed, for the purposes of inspecting conditions, activities, the results of activities,
7 records, operating logs, and contracts related to the Work conducted at the Site; reviewing the
8 progress of the Respondents and their contractors in carrying out the terms of this Consent
9 Order; conducting tests as EPA or its authorized representatives deem necessary; using a
10 security-approved digital camera or other documentary type equipment; and verifying the data
11 submitted to EPA by the Respondents. For security purposes, EPA agrees to allow Respondents
12 to review digital photographs and other recordings of the Site prior to leaving the Site. The
13 Respondents shall also allow EPA or its authorized representatives to inspect and copy all
14 records, files, photographs, documents, sampling and monitoring data, and other writings related
15 to the Work undertaken in carrying out this Consent Order. Respondents reserve their rights to
16 assert that security-sensitive photographs and any other documents are confidential business
17 information in accordance with Paragraph 48 and to request that EPA withhold these documents
18 as exempt from the Freedom of Information Act pursuant to Exemption 4, which protects trade
19 secrets and privileged or confidential commercial or financial information. If Respondents wish
20 that EPA consider whether such information is exempt from FOIA, they should separate and
21 label this information as "Privileged and Confidential." EPA agrees to coordinate with
22 Respondents, to the extent practicable, concerning security and health and safety measures
23 implemented by Respondents at the Site. Nothing herein shall be interpreted as limiting or
24 affecting EPA's right of entry or inspection authority under federal law. All parties with access
25 to the Site under this Paragraph shall comply with all approved health and safety plans.

26 48. The Respondents may assert a claim of business confidentiality covering part or all
27 of the information submitted to EPA pursuant to the terms of this Consent Order under 40 C.F.R.
28 Section 2.203, provided such claim is allowed by Section 104(e)(7) of CERCLA, 42

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4 U.S.C. Section 9604 (e)(7). This claim shall be asserted in the manner described by 40 C.F.R.
5 Section 2.203(b) and substantiated at the time the claim is made. Information determined to be
6 confidential by EPA will be given the protection specified in 40 C.F.R. Part 2. If no such
7 claim accompanies the information when it is submitted to EPA, it may be made available to the
8 public by EPA or the state without further notice to the Respondents. Respondents agree not to
9 assert confidentiality claims with respect to any documents, reports or other information created
10 or generated pursuant to the requirements of this Consent Order or to make any claim of
11 confidentiality with respect to any data, including, but not limited to, all sampling, analytical,
12 monitoring, hydrogeologic, scientific, chemical, or engineering data, or any other documents or
13 information evidencing conditions at or around the Site.

14 49. In entering into this Consent Order, Respondents waive any objections to any data
15 gathered, generated, or evaluated by EPA, ADEQ or Respondents in the performance or
16 oversight of the Work that has been validated according to the quality assurance/quality control
17 (QA/QC) procedures required by the Consent Order and any EPA-approved work plans or
18 sampling and analysis plans. If Respondents object to such data, Respondents shall submit to
19 EPA a report that identifies and explains their objections, describes the acceptable uses of the
20 data, if any, and identifies any limitations to the use of the data. The report must be submitted to
21 EPA within 30 days of the initial submission of Respondents' validated data, or within 30 days
22 of Respondents' receipt of EPA or ADEQ data.

23 50. If the Site, or the off-site area that is to be used for access or is within the scope of
24 the Focused RI/FS, is owned in whole or in part by parties other than those bound by this
25 Consent Order, Respondents will obtain, or use their best efforts to obtain, Site access
26 agreements from the present owner(s) within ninety (90) days of the effective date of this
27 Consent Order or the date it is determined access is required, whichever is later. Such
28 agreements shall provide access for EPA, its contractors and oversight officials, the state and its

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4 contractors, and the Respondents or their authorized representatives, and such agreements shall
5 specify that Respondents are not EPA's representative with respect to liability associated with
6 Site activities. Copies of such agreements shall be provided to EPA prior to Respondents'
7 initiation of field activities. Respondents' best efforts shall include providing reasonable
8 compensation to any off-site property owner. If access agreements are not obtained within the
9 time referenced above, Respondents shall immediately notify EPA of their inability to obtain
10 access. EPA may obtain access for the Respondents, perform those tasks or activities with EPA
11 contractors, or terminate the Consent Order in the event that Respondents cannot obtain access
12 agreements. In the event that EPA performs those tasks or activities with EPA contractors and
13 does not terminate the Consent Order, Respondents shall perform all other activities not
14 requiring access to that Site, and shall reimburse EPA for all costs incurred in performing such
15 activities. Respondents additionally shall integrate the results of any such tasks undertaken by
16 EPA into its reports and deliverables. Respondents also shall reimburse EPA for all costs and
17 attorney fees incurred by the United States to obtain access for the Respondents in the manner
18 described in Section XXI (Payment of Response Costs)..

19 **XV. DESIGNATED PROJECT COORDINATORS**

20 51. Documents including reports, approvals, disapprovals, and other correspondence
21 which must be submitted under this Consent Order, shall be sent by certified mail, return receipt
22 requested, to the following addressees or to any other addressees which the Respondents
23 and EPA designate in writing:

24 (a) Respondents will send copies of all documents to be submitted to EPA to EPA's
25 Project Coordinator as identified below:

26 2 hard copies and 1 electronic copy to:

27 Nadia Hollan
28 Remedial Project Manager

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4 Superfund Division (SFD-8-2)
5 US EPA, Region IX
6 75 Hawthorne Street
7 San Francisco, CA 94105
8 (415) 972-3187
9 hollan.nadia@epa.gov

10 Respondents will also send copies of all documents submitted to EPA to:

11 1 hard copy, 1 electronic copy or 3 electronic copies of documents if
12 submitted in compact disk format

13 Kris Kommalan
14 Arizona Department of Environmental Quality
15 1110 W. Washington St.
16 Phoenix, AZ 85007-2935
17 kommalan.kris@ev.state.az.us

18 1 electronic copy

19 Wayne Schiemann
20 US Army Corps of Engineers
21 AZ/NV Area Office
22 3636 N. Central Ave. Suite 900
23 Phoenix, AZ 85012-1936
24 wschiemann@spl.usace.army.mil

25 2 hard copies, 1 electronic copy

26 Sue Kraemer
27 Shaw E&I
28 1326 N. Market Street
Sacramento, CA 95834-1912
sue.kraemer@theshawgrp.com

(b) Documents to be submitted to the Respondents should be sent to Respondents' Project Coordinator as follows:

1 hard copy, 1 electronic copy to:

Judy Heywood, Remediation Project Manager
Arizona Public Service Company
P.O. Box 53999, Mail Station 8376
Phoenix, AZ 85072-3999
Judith.heywood@aps.com

EPA will also send copies of all documents submitted to Respondents' Project

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4 Coordinator to:

1 hard copy, 1 electronic copy to:

5 C. David Martinez, Senior Attorney
6 Pinnacle West Capital Corporation
7 P.O. Box 53999, Mail Station 8695
8 Phoenix, AZ 85072-3999
9 david.martinez@pinnaclewest.com

10 James J. Hamula, Esq.
11 Gallagher & Kennedy, P.A.
12 2575 East Camelback Road
13 Phoenix, AZ 85106-9225
14 JJH@gknet.com

15 52. Each Project Coordinator shall be responsible for overseeing the implementation of
16 this Consent Order. To the maximum extent possible, communications between the Respondents
17 and EPA shall be directed to the Project Coordinator by mail, with copies to such other persons
18 as EPA and Respondents may respectively designate. Communications include, but are not
19 limited to, all documents, reports, approvals, and other correspondence submitted under this
20 Consent Order.

21 53. EPA and the Respondents each have the right to change their respective Project
22 Coordinator. EPA and Respondents also have the right to change the number of copies of
23 documents required pursuant to this Consent Order. The other party must be notified in writing
24 at least 10 days prior to the change.

25 54. EPA's Project Coordinator shall have the authority lawfully vested in a Remedial
26 Project Manager ("RPM") and On-Scene Coordinator ("OSC") by the NCP. In addition, EPA's
27 Project Coordinator shall have the authority consistent with the National Contingency Plan, to
28 halt any work required by this Consent Order, and to take any necessary response action when
s/he determines that conditions at the Site may present an immediate endangerment to public
health or welfare or the environment. The absence of the EPA Project Coordinator from the area
under study pursuant to this Consent Order shall not be cause for the stoppage or delay of work.

4 **XVI. COMPLIANCE WITH OTHER LAWS**

5 55. Respondents shall comply with all local, state and federal laws that are applicable
6 when performing the Focused RI/FS. No local, state, or federal permit shall be required for any
7 portion of any action conducted entirely within the Motorola 52nd Street Site, including studies,
8 where such action is selected and carried out in compliance with Section 121 of CERCLA and
9 the applicable portions of the NCP. Where any portion of the Work is to be conducted outside
10 the boundaries of the Motorola 52nd Street Site and requires a federal or state permit or
11 approval, Respondents shall submit timely and complete applications and take all other actions
12 necessary to obtain and to comply with all such permits or approvals. This Consent Order is not,
13 and shall not be construed to be, a permit issued pursuant to any federal or state statute or
14 regulation.

15 **XVII. RETENTION OF RECORDS**

16 56. All records and documents in Respondents' possession that relate in any way to the
17 Work conducted at the Site shall be preserved during the conduct of this Consent Order and for a
18 minimum of 10 years after commencement of construction of any remedial action. The
19 Respondents shall acquire and retain copies of all documents that relate to the Site and are in the
20 possession of their employees, agents, accountants, contractors, or attorneys. After this 10 year
21 period, the Respondents shall notify EPA at least 90 days before the documents are scheduled to
22 be destroyed. If EPA requests that the documents be saved, the Respondents shall, at no cost to
23 EPA, give EPA the documents or copies of the documents.

24 57. Respondents hereby certify that to the best of their knowledge and belief, after
25 thorough inquiry, they have not altered, mutilated, discarded, destroyed or otherwise disposed of
26 any records, documents or other information (other than exactly identical copies) relating to their
27 potential liability regarding the Site or the Motorola 52nd Street Site since notification of
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4 potential liability by EPA and they have fully complied with any and all EPA requests for
5 information pursuant to Sections 104(e) and 122(3) of CERCLA, 42 U.S.C. §§ 9604(e) and
6 9622(e), and Section 3007 of RCRA, 42 U.S.C. § 6927.

7 XVIII. DISPUTE RESOLUTION

8 58. Unless otherwise expressly provided for in this Consent Order, the dispute
9 resolution procedures of this Section shall be the exclusive mechanism for resolving disputes
10 arising under this Consent Order. The Parties shall attempt to resolve any disagreements
11 concerning this Consent Order expeditiously and informally.

12 59. If Respondents object to any EPA action taken pursuant to this Consent Order,
13 including billings for Future Response Costs, they shall notify EPA in writing of their
14 objection(s) within five (5) days of such action, unless the objection(s) has/have been resolved
15 informally. EPA and Respondents shall have ninety (90) days from EPA's receipt of
16 Respondents' written objection(s) to resolve the dispute through formal negotiations (the
17 "Negotiation Period"). The Negotiation Period may be extended at the sole discretion of EPA.

18 60. Any agreement reached by the Parties pursuant to this Section shall be in writing and
19 shall, upon signature by the Parties, be incorporated into and become an enforceable part of this
20 Consent Order. If the Parties are unable to reach an agreement within the Negotiation Period, an
21 EPA management official at the Branch Chief level or higher will issue a written decision on the
22 dispute to Respondents. EPA's decision shall be incorporated into and become an enforceable
23 part of this Consent Order. Respondents' obligations under this Consent Order shall not be
24 tolled by submission of any objection for dispute resolution under this Section. Following
25 resolution of the dispute, as provided by this Section, Respondents shall fulfill the requirement
26 that was the subject of the dispute in accordance with the agreement reached or with EPA's
27 decision, whichever occurs.
28

4 **XIX. STIPULATED PENALTIES**

5 61. Respondents shall be liable to EPA for stipulated penalties in the amounts set forth in
6 this Section for failure to comply with the requirements of this Consent Order specified below
7 unless excused under Section XX (Force Majeure). "Compliance" by Respondents shall include
8 completion of the activities under this Consent Order, Focused RI/FS Work Plan or other plan
9 approved under this Consent Order identified below in accordance with all applicable
10 requirements of law, this Consent Order, the SOW, and any plans or other documents approved
11 by EPA pursuant to this Consent Order and within the specified time schedules established by
12 and approved under this Consent Order.

13 62. Stipulated Penalty Amounts - Major Deliverables

14 a. The following stipulated penalties shall accrue per day for any noncompliance
15 identified in Subparagraph 62(b):

<u>Penalty Per Violation Per Day</u>	<u>Period of Noncompliance</u>
\$ 7,000	1 st through 7 th day
\$ 14,000	8 th through 30 th day
\$ 27,500	31 st day and beyond

19 b. Compliance Milestones

- 20 1. Research Report (SOW Section 3.1.3)
- 21 2. Remedial Action Objectives Technical Memorandum (SOW Section
22 3.2.1)
- 23 3. Draft and Final Focused RI/FS Work Plan (SOW Section 3.3.1)
- 24 4. Compliance with the Schedule contained in the Final Focused RI/FS Work
25 Plan, including modifications to the Schedule approved by EPA
- 26 5. Technical Memorandums to supplement Focused RI/FS Work Plan (SOW
27 Section 3.3.1)
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- 4 6. Draft and Final Sampling and Analysis Plan (SOW Section 3.3.2)
- 5 7. Draft and Final Site Health and Safety Plan (SOW Section 3.3.3)
- 6 8. Notification of Initiation of Field Work (SOW Section 4.1)
- 7 9. Notification of Completion of Field Work (SOW Section 4.1)
- 8 10. Draft and Final Focused Remedial Investigation Report (Sow Section 4.3)
- 9 11. Draft and Final Focused Feasibility Study Report (SOW Section 5.3)

10 63. Stipulated Penalty Amounts - Other Reporting.

11 a. The following stipulated penalties shall accrue per day for any noncompliance
12 identified in Subparagraph 63(b):

<u>Penalty Per Violation Per Day</u>	<u>Period of Noncompliance</u>
\$ 1,000.00	1 st through 7 th day
\$ 2,000.00	8 th through 30 th day
\$ 4,000.00	31 st day and beyond

16 b. Compliance Milestones

17 The compliance milestones for this subsection are as follows:

- 18 1. Weekly Progress Reports
- 19 2. Monthly Progress Reports

20 64. For any failure to perform any other work required by this Consent Order that is
21 material to the conduct of the Work, stipulated penalties shall accrue in the amount of \$2,500 per
22 day, per violation, for the first seven days of noncompliance, \$5,000 per day, per violation, for
23 days 8 through 30 of noncompliance, and in the amount of \$10,000 per day, per violation,
24 thereafter. In the event that EPA assumes performance of a portion or all of the Work pursuant
25 to Paragraph 82 of Section XXIII (Reservation of Rights by EPA), Respondents shall be liable
26 for a stipulated penalty in the amount of five hundred thousand dollars (\$500,000).

27 65. All penalties shall begin to accrue on the day after the complete performance is due
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4 or the day a violation occurs, and shall continue to accrue through the final day of the correction
5 of the noncompliance or completion of the activity. However, stipulated penalties shall not
6 accrue: (1) with respect to a deficient submission under Section XI (EPA Approval of Plans and
7 Other Submissions), during the period, if any, beginning on the 31st day after EPA's receipt of
8 such submission until the date that EPA notifies Respondents of any deficiency; and (2) with
9 respect to a decision by the EPA Management Official at the Branch Chief level or higher, under
10 Section XVIII (Dispute Resolution), during the period, if any, beginning on the 21st day after the
11 Negotiation Period begins until the date that the EPA management official issues a final decision
12 regarding such dispute. Nothing herein shall prevent the simultaneous accrual of separate
13 penalties for separate violations of this Consent Order.

14 66. Following EPA's determination that Respondents have failed to comply with a
15 requirement of this Consent Order, EPA may give Respondents written notification of the same
16 and describe the noncompliance. EPA may send Respondents a written demand for the payment
17 of the penalties. However, penalties shall accrue as provided in the preceding Paragraph
18 regardless of whether EPA has notified Respondents of a violation.

19 67. All penalties accruing under this Section shall be due and payable to EPA within 30
20 days of Respondents' receipt from EPA of a demand for payment of the penalties, unless
21 Respondents invoke the dispute resolution procedures under Section XVIII (Dispute Resolution).
22 All payments to EPA under this Section shall be paid by certified or cashier's check(s) made
23 payable to "EPA Hazardous Substances Superfund," shall be mailed to Cincinnati Accounting
24 Operations, ATTN: Region 9 Receivables, P.O. Box 371099M, Pittsburgh, PA 15251, shall
25 indicate that the payment is for stipulated penalties, and shall reference the EPA Region and
26 Site/Spill ID Number 09BE, the EPA Docket Number, and the name and address of the
27 party(ies) making payment. Copies of check(s) paid pursuant to this Section, and any
28 accompanying transmittal letter(s) shall be sent to EPA's Project Coordinator.

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4 68. The payment of penalties shall not alter in any way Respondents' obligation to
5 complete performance of the Work required under this Consent Order.

6 69. Penalties shall continue to accrue during any dispute resolution period, but need not
7 be paid until 15 days after the dispute is resolved by agreement or by receipt of EPA's decision.

8 70. If Respondents fail to pay stipulated penalties when due, EPA may institute
9 proceedings to collect the penalties, as well as Interest. Respondents shall pay Interest on the
10 unpaid balance, which shall begin to accrue on the date of EPA's demand.

11 71. Nothing in this Consent Order shall be construed as prohibiting, altering, or in any
12 way limiting the ability of EPA to seek any other remedies or sanctions available by virtue of
13 Respondents' violation of this Consent Order or of the statutes and regulations upon which it is
14 based, including, but not limited to, penalties pursuant to Section 122(l) of CERCLA, 42 U.S.C.
15 § 9722(l), and punitive damages pursuant to Section 107(c)(3) of CERCLA, 42 U.S.C.
16 § 9607(c)(3). Notwithstanding any other provision of this Section, EPA may, in its
17 unreviewable discretion, waive any portion of stipulated penalties that have accrued pursuant to
18 this Consent Order.

19 XX. FORCE MAJEURE

20 72. Respondents agree to perform all requirements of this Consent Order within the
21 time limits established under this Consent Order, unless the performance is delayed by a *force*
22 *majeure*. For purposes of this Consent Order, *force majeure* is defined as any event arising from
23 causes beyond the control of Respondents or of any entity controlled by Respondents, including
24 but not limited to their contractors and subcontractors, which delays or prevents performance of
25 any obligation under this Consent Order despite Respondents' best efforts to fulfill the
26 obligation. *Force majeure* does not include financial inability to complete the Work or increased
27 cost of performance.
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4 73. If any event occurs or has occurred that may delay the performance of any
5 obligation under this Consent Order, whether or not caused by a *force majeure* event,
6 Respondents shall notify by telephone or e-mail the Project Coordinator or, in his or her absence,
7 EPA's Chief of the Superfund, Private Sites and DOE Section ("Section Chief"), within 48 hours
8 of when the Respondents knew or should have known that the event might cause a delay.
9 Currently, Michael Montgomery is the Section Chief; his phone number is (415) 972-3438.
10 Within five business days thereafter, Respondents shall provide in writing the reasons for the
11 delay; the anticipated duration of the delay; all actions taken or to be taken to prevent or
12 minimize the delay; a schedule for implementation of any measures to be taken to mitigate the
13 effect of the delay; and a statement as to whether, in the opinion of Respondents, such event may
14 cause or contribute to an endangerment to public health, welfare or the environment.
15 Respondents shall exercise best efforts to avoid or minimize any delay and any effects of a delay.
16 Failure to comply with the above requirements shall preclude Respondents from asserting any
17 claim of force majeure.

18 74. If EPA agrees that the delay or anticipated delay is attributable to a *force majeure*
19 event, the time for performance of the obligations under this Consent Order that are affected by
20 the *force majeure* event will be extended by EPA for such time as is necessary to complete those
21 obligations. An extension of the time for performance of the obligations affected by the *force*
22 *majeure* event shall not, of itself, extend the time for performance of any other obligation. If
23 EPA does not agree that the delay or anticipated delay has been or will be caused by a *force*
24 *majeure* event, EPA will notify Respondents in writing of its decision. If EPA agrees that the
25 delay is attributable to a *force majeure* event, EPA will notify Respondents in writing of the
26 length of the extension, if any, for performance of the obligations affected by the *force majeure*
27 event.
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4 **XXI. PAYMENT OF RESPONSE COSTS**

5 **75. Payment for Past Response Costs**

6 a. EPA will send Respondents a bill requiring payment of all costs incurred
7 through June 30, 2004. The bill will include, but is not limited to EPA's certified Agency
8 Financial Management System summary data (SCORES Reports), or such other summary as
9 certified by EPA. Within thirty (30) days after receipt of this bill, Respondents shall pay the sum
10 of this bill to EPA for EPA's Past Response Costs. Payment shall be made to EPA by certified
11 or cashiers check made payable to "EPA Hazardous Substance Superfund." Each check, or letter
12 accompanying each check, shall identify the name and address of the party making payment, the
13 Site name as well as the name of the Motorola 52nd Street Site, the EPA Region (Region 9) and
14 Site/Spill ID Number 09BE, and the EPA docket number for this action. Payment shall be sent
15 to:

16 EPA - Cincinnati Accounting Operations
17 Attention: Region 9 Receivables
18 P.O. Box 371099M
19 Pittsburgh, PA 15251

20 b. At the time of payment, Respondents shall send notice that payment has been
21 made to the EPA Project Coordinator.

22 c. The total amount to be paid by Respondents pursuant to Subparagraph 75a
23 shall be deposited in the Motorola 52nd Street Superfund Site Special Account within the EPA
24 Hazardous Substance Superfund to be retained and used to conduct or finance response actions
25 at or in connection with the Motorola 52nd Street Site, or to be transferred by EPA to the EPA
26 Hazardous Substance Superfund.

27 **76. Payment for Future Response Costs.**

28 a. Respondents shall pay EPA all Future Response Costs not inconsistent with
the NCP. On a periodic basis, EPA will send Respondents a bill requiring payment, including,
but not limited to EPA's certified Agency Financial Management System summary data

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4 (SCORES Reports), or such other summary as certified by EPA . Respondents shall make all
5 payments within 30 days of receipt of each bill requiring payment, except as otherwise provided
6 in Paragraph 78 of this Consent Order. Respondents shall make all payments required by this
7 Paragraph by a certified or cashier's check or checks made payable to "EPA Hazardous
8 Substance Superfund," referencing the name and address of the party making payment, the Site
9 name and the name of the Motorola 52nd Street Superfund Site, the EPA Region (Region 9),
10 Site/Spill ID Number 09BE, and the EPA docket number for this action. Respondents shall send
11 the check(s) to:

12 EPA - Cincinnati Accounting Operations
13 Attention: Region 9 Receivables
14 P.O. Box 371099M
15 Pittsburgh, PA 15251

16 Alternatively, Respondents may make payments required by this Paragraph by Electronic
17 Funds Transfer ("EFT") in accordance with EFT procedures to be provided to Respondents by
18 EPA Region 9, and shall be accompanied by a statement identifying the name and address of the
19 party making payment, the Site name and the name of the Motorola 52nd Street Superfund Site,
20 the EPA Region (Region 9), Site/Spill ID Number 09BE, and the EPA docket number for this
21 action.

22 b. At the time of payment, Respondents shall send notice that payment has been
23 made to the EPA Project Coordinator.

24 c. The total amount to be paid by Respondents pursuant to Subparagraph 76a
25 shall be deposited in the Motorola 52nd Street Superfund Site Special Account within the EPA
26 Hazardous Substance Superfund to be retained and used to conduct or finance response actions
27 at or in connection with the Motorola 52nd Street Site, or to be transferred by EPA to the EPA
28 Hazardous Substance Superfund.

77. In the event that the payments for Past Response Costs or Future Response Costs are

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4 not made within 30 days of Respondents' receipt of a bill, Respondents shall pay Interest on the
5 unpaid balance. The Interest on Past Response Costs and Future Response Costs shall begin to
6 accrue on the date payment of the bill is past due and shall continue to accrue until the date of
7 payment. Payments of Interest made under this Paragraph shall be in addition to such other
8 remedies or sanctions available to the United States by virtue of Respondents' failure to make
9 timely payments under this Section, including but not limited to, payments of stipulated penalties
10 pursuant to Section XIX (Stipulated Penalties). Respondents shall make all payments required
11 by this Paragraph in the manner described in Paragraph 76.

12 78. " Respondents may contest payment of the Past Response Costs or any Future
13 Response Costs if they determine that EPA has made an accounting error or if they believe EPA
14 incurred excess costs as a direct result of an EPA action that was inconsistent with the NCP.
15 Such objection shall be made in writing within 30 days of receipt of the bill and must be sent to
16 the EPA Project Coordinator. Any such objection shall specifically identify the contested cost(s)
17 and the basis for objection. In the event of an objection, Respondents shall within the 30 day
18 period pay all uncontested Past Response Costs or Future Response Costs to EPA in the manner
19 described in Paragraph 76. Simultaneously, Respondents shall establish an interest-bearing
20 escrow account in a federally-insured bank duly chartered in the State of Arizona and remit to
21 that escrow account funds equivalent to the amount of the contested Past Response Costs or
22 Future Response Costs. Respondents shall send to the EPA Project Coordinator a copy of the
23 transmittal letter and check paying the uncontested Past Response Costs or Future Response
24 Costs, and a copy of the correspondence that establishes and funds the escrow account,
25 including, but not limited to, information containing the identity of the bank and bank account
26 under which the escrow account is established as well as a bank statement showing the initial
27 balance of the escrow account. Simultaneously with establishment of the escrow account,
28 Respondents shall initiate the Dispute Resolution procedures in Section XVIII (Dispute

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4 Resolution). If EPA prevails in the dispute, within 5 days of the resolution of the dispute,
5 Respondents shall pay the sums due (with accrued interest) to EPA in the manner described in
6 Paragraph 76. If Respondents prevail concerning any aspect of the contested costs, Respondents
7 shall pay that portion of the costs (plus associated accrued interest) for which they did not
8 prevail to EPA in the manner described in Paragraph 76. Respondents shall be disbursed any
9 balance of the escrow account. The dispute resolution procedures set forth in this Paragraph in
10 conjunction with the procedures set forth in Section XVIII (Dispute Resolution) shall be the
11 exclusive mechanisms for resolving disputes regarding Respondents' obligation to reimburse
12 EPA for its Past Response Costs and Future Response Costs.

13 **XXII. EPA COVENANT**

14 79. In consideration of the actions that will be performed and the payments that will be
15 made by Respondents under the terms of this Consent Order, and except as otherwise
16 specifically provided in this Consent Order, EPA covenants not to sue or take administrative
17 action against Respondents pursuant to Sections 106 and 107(a) of CERCLA, 42 U.S.C. §§ 9606
18 and 9607(a), for performance of the Work and for recovery of Past Response Costs and Future
19 Response Costs. This covenant shall take effect upon receipt by EPA of the Past Response Costs
20 due under Section XXI (Payment of Response Costs) of this Consent Order and any Interest or
21 Stipulated Penalties due for failure to pay Past Response Costs as required by Sections XXI
22 (Payment of Response Costs) and XIX (Stipulated Penalties). This covenant is conditioned upon
23 the complete and satisfactory performance by Respondents of all obligations under this Consent
24 Order, including, but not limited to, payment of Future Response Costs pursuant to Section XXI
25 (Payment of Response Costs) with the exception of any continuing obligations required by this
26 Consent Order. This covenant extends only to Respondents and does not extend to any other
27 person.
28

5 **XXIII. RESERVATIONS OF RIGHTS**

6 80. Except as specifically provided in this Consent Order, nothing herein shall limit the
7 power and authority of EPA or the United States to take, direct, or order all actions necessary to
8 protect public health, welfare, or the environment or to prevent, abate, or minimize an actual or
9 threatened release of hazardous substances, pollutants or contaminants, or hazardous or solid
10 waste on, at, or from the Site or the Motorola 52nd Street Site. Further, nothing herein shall
11 prevent EPA from seeking legal or equitable relief to enforce the terms of this Consent Order,
12 from taking other legal or equitable action as it deems appropriate and necessary, or from
13 requiring Respondents in the future to perform additional activities pursuant to CERCLA or any
14 other applicable law.

15 81. The covenant not to sue set forth in Section XXII (EPA Covenant) above does not
16 pertain to any matters other than those expressly identified therein. EPA reserves, and this
17 Consent Order is without prejudice to, all rights against Respondents with respect to all other
18 matters, including, but not limited to:

19 a. claims based on a failure by Respondents to meet a requirement of this
20 Consent Order;

21 b. liability for costs not included within the definition of Past Response
22 Costs and Future Response Costs;.

23 c. liability for performance of response action other than the Work;

24 d. criminal liability;

25 e. liability for damages for injury to, destruction of, or loss of natural
26 resources, and for the costs of any natural resource damage assessments;

27 f. liability arising from the past, present, or future disposal, release or
28 threat of release of Waste Materials outside of the Site; and

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4 g. liability for costs incurred or to be incurred by the Agency for Toxic
5 Substances and Disease Registry related to the Site that are not paid by Respondents as Past
6 Response Costs or Future Response Costs.

7 82. Work Takeover. In the event EPA determines that Respondents have ceased
8 implementation of any portion of the Work, are seriously or repeatedly deficient or late in their
9 performance of the Work, or are implementing the Work in a manner that may cause an
10 endangerment to human health or the environment, EPA may assume the performance of all or
11 any portion of the Work as EPA determines necessary. Respondents may invoke the procedures
12 set forth in Section XVIII (Dispute Resolution) to dispute EPA's determination that takeover of
13 the Work is warranted under this Paragraph. Costs incurred by EPA in performing the Work
14 pursuant to this Paragraph shall be considered Future Response Costs that Respondents shall pay
15 pursuant to Section XXI (Payment of Response Costs). Notwithstanding any other provision of
16 this Consent Order, EPA retains all authority and reserves all rights to take any and all response
17 actions authorized by law.

18 **XXIV. RESPONDENTS' COVENANT**

19 83. Respondents covenant not to sue and agree not to assert any claims or causes of
20 action against the United States, or its contractors or employees, with respect to the Work, Past
21 Response Costs, Future Response Costs, or this Consent Order, including, but not limited to:

22 a. any direct or indirect claim for reimbursement from the Hazardous Substance
23 Superfund established by 26 U.S.C. § 9507, based on Sections 106(b)(2), 107, 111, 112, or 113
24 of CERCLA, 42 U.S.C. §§ 9606(b)(2), 9607, 9611, 9612, or 9613, or any other provision of law;

25 b. any claim arising out of the Work or arising out of the response actions for
26 which the Past Response Costs or Future Response Costs have or will be incurred, including any
27 claim under the United States Constitution, the Tucker Act, 28 U.S.C. § 1491, the Equal Access
28

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4 to Justice Act, 28 U.S.C. § 2412, as amended, or at common law; or

5 c. any claim against the United States pursuant to Sections 107 and 113 of
6 CERCLA, 42 U.S.C. §§ 9607 and 9613, relating to the Site.

7 84. These covenants shall not apply in the event the United States brings a cause of
8 action or issues an order pursuant to the reservations set forth in Section XXIII of this Consent
9 Order, only to the extent that claims of Respondents arise from the same response action,
10 response costs, or damages that the United States is seeking pursuant to the applicable
11 reservation.

12 85. Nothing in this Agreement shall be deemed to constitute approval or
13 preauthorization of a claim within the meaning of Section 111 of CERCLA, 42 U.S.C. § 9611, or
14 40 C.F.R. § 300.700(d).

15 86. By signing this Consent Order and taking actions under this Consent Order, the
16 Respondents do not necessarily agree with EPA's Findings of Fact and Conclusions of Law.

17 Furthermore, the participation of the Respondents in this Consent Order shall not be
18 considered an admission of liability and is not admissible in evidence against the Respondents in
19 any judicial or administrative proceeding other than a proceeding by the United States, including
20 EPA, to enforce this Consent Order or a judgment relating to it. Respondents retain their rights
21 to assert claims against other potentially responsible parties at the Site. However, the
22 Respondents agree not to contest the validity or terms of this Consent Order, or the procedures
23 underlying or relating to it in any action brought by the United States, including EPA, to enforce
24 its terms.

25 XXV. OTHER CLAIMS

26 87. By issuance of this Consent Order, the United States or EPA assumes no liability for
27 injuries or damages to persons or property resulting from any acts or omissions of Respondents.
28

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4 The United States or EPA shall not be deemed a party to any contract entered into by
5 Respondents or their directors, officers, employees, agents, successors, representatives, assigns,
6 contractors, or consultants in carrying out actions pursuant to this Consent Order.

7 88. Except as expressly provided in Section XXIII (Reservation of Rights) and Section XXII
8 (EPA Covenant), nothing in this Consent Order constitutes a satisfaction of or release from any
9 claim or cause of action against Respondents or any person not a party to this Consent Order, for
10 any liability such person may have under CERCLA, other statutes, or common law, including
11 but not limited to any claims of the United States for costs, damages and interest under Sections
12 106 and 107 of CERCLA, 42 U.S.C. §§ 9606 and 9607.

13 89. No action or decision by EPA pursuant to this Consent Order shall give rise to any
14 right to judicial review, except as set forth in Section 113(h) of CERCLA, 42 U.S.C. § 9613(h).

15 **XXVI. CONTRIBUTION PROTECTION**

16 90. The Parties agree that Respondents are entitled, as of the Effective Date, to
17 protection from contribution actions or claims as provided by Sections 113(f)(2) and 122(h)(4)
18 of CERCLA, 42 U.S.C. §§ 9613(f)(2) and 9622(h)(4), for "matters addressed" in this Consent
19 Order. The "matters addressed" in this Consent Order are the Work, Past Response Costs, and
20 Future Response Costs. Nothing in this Consent Order precludes the United States or
21 Respondents from asserting any claims, causes of action, or demands against any person not a
22 party to this Consent Order for indemnification, contribution, or cost recovery.

23 **XXVII. INDEMNIFICATION**

24 91. Respondents shall indemnify, save and hold harmless the United States, its officials,
25 agents, contractors, subcontractors, employees and representatives from any and all claims or
26 causes of action arising from, or on account of negligent or other wrongful acts or omissions of
27
28

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4 Respondents, their officers, directors, employees, agents, contractors, or subcontractors, in
5 carrying out actions pursuant to this Consent Order. In addition, Respondents agree to pay the
6 United States all costs incurred by the United States, including but not limited to attorneys fees
7 and other expenses of litigation and settlement, arising from or on account of claims made
8 against the United States based on negligent or other wrongful acts or omissions of Respondents,
9 their officers, directors, employees, agents, contractors, subcontractors and any persons acting on
10 its behalf or under their control, in carrying out activities pursuant to this Consent Order. The
11 United States shall not be held out as a party to any contract entered into by or on behalf of
12 Respondents in carrying out activities pursuant to this Consent Order. Neither Respondents nor
13 any such contractor shall be considered an agent of the United States.

14 92. Respondents waive all claims against the United States for damages or
15 reimbursement or for set-off of any payments made or to be made to the United States, arising
16 from or on account of any contract, agreement, or arrangement between Respondents and any
17 person for performance of Work on or relating to the Site. In addition, Respondents shall
18 indemnify and hold harmless the United States with respect to any and all claims for damages or
19 reimbursement arising from or on account of any contract, agreement, or arrangement between
20 Respondents and any person for performance of Work on or relating to the Site.

21 **XXVIII. INSURANCE**

22 93. At least fifteen (15) days prior to Notification of Fieldwork as required by Section
23 4.1 of the SOW, Respondents shall secure, and shall maintain for the duration of this Consent
24 Order, comprehensive general liability insurance and automobile insurance with limits of two
25 million dollars, combined single limit, naming the United States as an additional insured. Within
26 the same period, Respondents shall provide EPA with certificates of such insurance and a copy
27 of each insurance policy. Respondents shall submit such certificates and copies of policies each
28

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4 year on or before the anniversary of the Effective Date. In addition, for the duration of the
5 Consent Order, Respondents shall satisfy, or shall ensure that their contractors or subcontractors
6 satisfy, all applicable laws and regulations regarding the provision of worker's compensation
7 insurance for all persons performing the Work on behalf of Respondents in furtherance of this
8 Consent Order. If Respondents demonstrate by evidence satisfactory to EPA that any contractor
9 or subcontractor maintains insurance equivalent to that described above, or insurance covering
10 some or all of the same risks but in an equal or lesser amount, then Respondents need provide
11 only that portion of the insurance described above which is not maintained by such contractor or
12 subcontractor.

13 **XXIX. FINANCIAL ASSURANCE**

14 94. Prior to Notification of Fieldwork as required by Section 4.1 of the SOW,
15 Respondents shall establish and maintain financial security for the benefit of EPA in the amount
16 required to fully and adequately complete the Work in one or more of the following forms:

17 a. a surety bond unconditionally guaranteeing payment and/or performance of the
18 Work;

19 b. one or more irrevocable letters of credit, payable to or at the direction of EPA,
20 issued by financial institution(s) acceptable in all respects to EPA equaling the total estimated
21 cost of the Work;

22 c. a trust fund administered by a trustee acceptable in all respects to EPA;

23 d. a policy of insurance issued by an insurance carrier acceptable in all respects
24 to EPA, which ensures the payment and/or performance of the Work;

25 e. a corporate guarantee to perform the Work provided by one or more parent
26 corporations or subsidiaries of Respondents, or by one or more unrelated corporations that have
27 a substantial business relationship with Respondents; including a demonstration that any such
28

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4 company satisfies the financial test requirements of 40 C.F.R. Part 264.143(f);

5 f. a corporate guarantee to perform the Work by Respondents, including a
6 demonstration that Respondents satisfy the requirements of 40 C.F.R. Part 264.143(f); and/or

7 g. a demonstration that one or more of the Respondents possess sufficient net
8 worth to complete the Work required by this Consent Order, as evidenced by audited financial
9 statements determined by EPA to show sufficient net worth.

10 95. Any and all financial assurance instruments provided pursuant to this Section shall
11 be in form and substance satisfactory to EPA, determined in EPA's sole discretion. In the event
12 that EPA determines at any time that the financial assurances provided pursuant to this Section
13 (including, without limitation, the instrument(s) evidencing such assurances) are inadequate,
14 Respondents shall, within thirty (30) days of receipt of notice of EPA's determination, obtain
15 and present to EPA for approval one of the other forms of financial assurance listed in Paragraph
16 94, above. In addition, if at any time EPA notifies Respondents that the anticipated cost of
17 completing the Work has increased, then, within thirty (30) days of such notification,
18 Respondents shall obtain and present to EPA for approval a revised form of financial assurance
19 (otherwise acceptable under this Section) that reflects such cost increase. Respondents' inability
20 to demonstrate financial ability to complete the Work shall in no way excuse performance of any
21 activities required under this Consent Order.

22 96. If Respondents seek to ensure completion of the Work through a guarantee pursuant
23 to Subparagraph 94e or 94f of this Consent Order, Respondents shall (i) demonstrate to EPA's
24 satisfaction that the guarantor satisfies the requirements of 40 C.F.R. Part 264.143(f); and (ii)
25 resubmit sworn statements conveying the information required by 40 C.F.R. Part 264.143(f)
26 annually, on or before the anniversary of the Effective Date, to EPA. For the purposes of this
27 Consent Order, wherever 40 C.F.R. Part 264.143(f) references "sum of current closure and post-
28 closure costs estimates and the current plugging and abandonment costs estimates," the cost

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4 estimate for the Work as identified in the Focused RI/FS Workplan (section 3.3.1 of the SOW)
5 shall be used in relevant financial test calculations. If Respondents seek to ensure completion of
6 the Work through audited financial statements pursuant to Subparagraph 94g of this Consent
7 Order, Respondents shall submit annually until the Work is completed, a sworn statement by
8 Respondent(s) Chief Financial Officer(s) in substantially the same form as Appendix C.

9 97. If, after the Effective Date, Respondents can show that the estimated cost to
10 complete the remaining Work has diminished, Respondents may, on any anniversary date of the
11 Effective Date, or at any other time agreed to by the Parties, reduce the amount of the financial
12 security provided under this Section to the estimated cost of the remaining Work to be
13 performed. Respondents shall submit a proposal for such reduction to EPA, in accordance with
14 the requirements of this Section, and may reduce the amount of the security after receiving
15 written approval from EPA. In the event of a dispute, Respondents may reduce the amount of
16 security in accordance with the written decision resolving the dispute.

17 98. Respondents may change the form of financial assurance provided under this Section
18 at any time, upon notice to and prior written approval by EPA, provided that EPA determines
19 that the new form of assurance meets the requirements of this Section. In the event of a dispute,
20 Respondents may change the form of the financial assurance only in accordance with the written
21 decision resolving the dispute.

22 **XXX. SEVERABILITY/INTEGRATION/APPENDICES**

23 99. If a court issues an order that invalidates any provision of this Consent Order or finds
24 that Respondents have sufficient cause not to comply with one or more provisions of this
25 Consent Order, Respondents shall remain bound to comply with all provisions of this Consent
26 Order not invalidated or determined to be subject to a sufficient cause defense by the court's
27 order.
28

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4 100. This Consent Order and its appendices constitute the final, complete and exclusive
5 agreement and understanding among the Parties with respect to the settlement embodied in this
6 Consent Order. The parties acknowledge that there are no representations, agreements or
7 understandings relating to the settlement other than those expressly contained in this Consent
8 Order. The following Appendices are attached to and incorporated into this Consent Order:
9 "Appendix A" is the SOW.
10 "Appendix B" is the map of the Motorola 52nd Street Site.
11 "Appendix C" is the CFO Statement Form

12 **XXXI. SUBSEQUENT MODIFICATION**

13 101. The EPA Project Coordinator may make modifications consistent with CERCLA,
14 the NCP, or applicable EPA guidance, policies, and procedures to any plan or schedule or
15 Statement of Work in writing or by oral direction. Any oral modification will be memorialized
16 in writing by EPA promptly, but shall have as its effective date the date of the EPA Project
17 Coordinator's oral direction. Any other requirements of this Consent Order may be modified in
18 writing by mutual agreement of the parties.

19 102. If Respondents seek permission to deviate from any approved work plan or
20 schedule or Statement of Work, Respondents' Project Coordinator shall submit a written or oral
21 request to EPA for approval outlining the proposed modification and its basis. Any oral request
22 will be memorialized in writing promptly by Respondents. Respondents may not proceed with
23 the requested deviation until receiving oral or written approval from the EPA Project
24 Coordinator. Any oral approval shall be memorialized in writing promptly by EPA.

25 103. No informal advice, guidance, suggestion, or comment by the EPA Project
26 Coordinator or other EPA representatives regarding reports, plans, specifications, schedules, or
27 any other writing submitted by Respondents shall relieve Respondents of their obligation to
28

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4 obtain any formal approval required by this Consent Order, or to comply with all requirements of
5 this Consent Order, unless it is formally modified.

6 **XXXII. EFFECTIVE DATE**

7 104. The effective date of this Consent Order shall be the date it is signed by EPA.
8

9 **XXXIII. NOTICE OF COMPLETION OF WORK**

10 105. When EPA determines, after EPA's review of the Final Focused Remedial
11 Investigation Report and Final Focused Feasibility Study Report, that all Work has been fully
12 performed in accordance with this Consent Order, with the exception of any continuing
13 obligations required by this Consent Order, EPA will provide written notice of completion of
14 Work to Respondents. If EPA does not provide a notice of completion of work, EPA will
15 provide Respondents with a written explanation of why EPA has determined that the Work is
16 incomplete. EPA will use best efforts to provide Respondents with a notice of completion of
17 work or written explanation that the Work is incomplete within ninety (90) days of approval of
18 the Final Focused Feasibility Study Report.
19

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21
22
23 Agreed this 22nd day of July, 2004

24 For Arizona Public Service Company

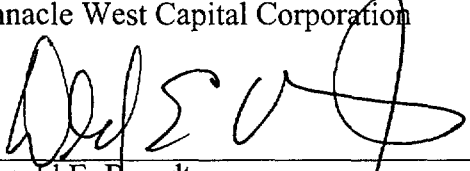
25
26 By: 

27 Edward Z. Fox
28 Vice President, Communications, Environmental & Safety

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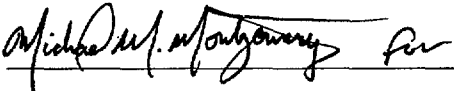
4 Agreed this 26th day of July, 2004

5 For Pinnacle West Capital Corporation

6
7 By: 

8 Donald E. Brandt
9 Executive Vice President & Chief Financial Officer,
10 Pinnacle West Capital Corporation and Arizona Public Service Company

11 It is so ORDERED AND AGREED this 26th day of July, 2004

12
13 By:  for

14 Kathleen Johnson
15 Chief, Federal Facilities and Site Cleanup Branch
16 U.S. Environmental Protection Agency
17 Region 9
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1 Plan. If the results of the initial site characterization indicate sources of COCs in the soils
2 and/or groundwater, the Respondent will assess the risks of the identified COC
3 contamination to human health and the environment. (Section 4.0 REMEDIAL
4 INVESTIGATION)

5 • Finally, if EPA determines that the risks at the Site are unacceptable, the Respondents
6 will be required to develop and evaluate remedial alternatives that would mitigate the
7 risks. (Section 5.0 FEASIBILITY STUDY)

9 2.0 WORK TO BE CONDUCTED

10 The Respondents will conduct this Focused RI/FS and will produce deliverables to EPA
11 for review and approval that are in accordance with the Consent Order, this SOW, "Guidance for
12 Conducting Remedial Investigations and Feasibility Studies Under CERCLA, U.S. EPA, Office
13 of Emergency and Remedial Response, October 1988" ("RI/FS Guidance"), presumptive remedy
14 guidance for characterizing and selecting remedies at sites with volatile organic compounds in
15 soils, and any other guidance documents that are relevant to conducting an Focused RI/FS. A
16 summary of deliverables is provided in Attachment B and selected guidance and reference
17 documents are included in Attachment C. **The RI/FS Guidance describes the report format
18 and the required report content; relevant sections of the guidance are noted throughout
19 this SOW in parentheses.**

20
21
22 The Respondents will furnish all necessary personnel, materials, and services needed, or
23 incidental to, performing the Focused RI/FS, except as otherwise specified in the Consent Order.
24 All work performed under this SOW shall be under the direction and supervision of qualified
25 personnel. All technical reports and other deliverables shall be prepared under the direction and
26 supervision of an Arizona Professional Engineer or Registered Geologist.

27
28 The RI and FS are interactive and may be conducted concurrently so that the data

1 collected in the RI influences the development of remedial alternatives in the FS, which in turn
2 affects the data needs and the scope of treatability studies, if they are necessary. In addition,
3 EPA encourages presumptive remedies for sites with VOCs in soil, which will streamline the FS
4 process towards remedy selection. The Final Focused RI/FS Report, as adopted by EPA, forms
5 the basis for the selection of the remedy for the Site and will provide the information necessary
6 to support the development of additional Records of Decision for the Motorola 52nd Street
7 Superfund Site. The remedial action alternative selected by EPA will meet the cleanup standards
8 specified in CERCLA Section 121.

10 As specified in CERCLA Section 104(a)(1), EPA will provide oversight of the activities
11 conducted by the Respondents throughout the Focused RI/FS, and the Respondents will support
12 EPA's implementation of oversight activities. The Respondents shall produce Monthly Progress
13 Reports according to the requirements in the Consent Order. The following sections describe the
14 specific deliverables and requirements for the Focused RI/FS.

16 3.0 SCOPING PHASE (RI/FS Guidance, Chapter 2)

17 When scoping the specific aspects of a project, the Respondents will discuss with EPA all
18 project planning decisions and special concerns associated with the Site. The following activities
19 will be performed by the Respondents as a function of the scoping process:

21 3.1 Site Research (2.2)

22 The Respondents will conduct historical research of potential COC use and disposal at
23 the Site, and submit a Research Report summarizing the results to EPA. This information will
24 be utilized to better scope the project and will guide the development of the subsequent Work
25 Plans for additional data collection necessary to characterize the Site, better define potential
26 applicable or relevant and appropriate requirements (ARARs), and narrow the range of
27 preliminarily identified remedial alternatives. Tasks for site research and reporting are detailed in
28

1 the following subsections.

2 3.1.1 Research Site Background

3 The Respondents will gather and analyze the existing background information, and
4 conduct additional research as needed to identify potential COC source areas at the Site. Before
5 planning Focused RI/FS activities, all existing information will be thoroughly compiled and
6 reviewed by the Respondents. Specifically, this will include presently available information
7 relating to the varieties and quantities of COCs at the Site, and past COC disposal practices. The
8 research is expected to include records reviews and employee interviews. This report will also
9 include results from any previous sampling events that may have been conducted. The
10 Respondents will refer to Table 2-1 of the RI/FS Guidance for a comprehensive list of data
11 collection information sources. The Respondents shall use this information to develop a
12 conceptual understanding of the Site, i.e., operations, contaminant uses and disposal, and
13 potential migration pathways. The Respondents shall establish Data Quality Objectives (DQOs)
14 subject to EPA approval which specify the usefulness of existing data. Decisions on the
15 necessary data and DQOs will be made by EPA.

16 3.1.2 Conduct Site Visit

17 The Respondents will conduct a visit of the Site during the project scoping phase to assist
18 in developing a conceptual understanding of sources and areas of COC contamination as well as
19 potential exposure pathways and receptors at the Site. During the visit the Respondents should
20 observe the area's physiography, hydrology, geology, and demographics, as well as natural
21 resource, ecological and cultural features.

22 3.1.3 Research Report

23 The Respondents will submit a Research Report (RR) within sixty (60) days of the
24 Consent Order Effective Date. The RR will contain a compilation and summary of the activities
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1 conducted above, and include a discussion of the potential COC source areas known or suspected
2 by the Respondents. The RR will contain (1) a narrative of the work completed, with detailed
3 descriptions of the configuration, operation, and historical uses of the potential COC source
4 areas, (2) detailed maps depicting all existing buildings and other site features of interest, figures,
5 and tables depicting the layout, locations, and uses of site features, and (3) any recommendations
6 for investigation of the areas. The RR shall also present a discussion of a preliminary conceptual
7 site model. This conceptual site model shall identify any known or suspected sources of COC
8 contamination, types of COCs and affected media, fate and transport of each contaminant in each
9 medium and any known or potential human or environmental receptors. This conceptual site
10 model will be refined as new data become available and presented in the Focused RI/FS
11 Workplan, and reports.

14 3.2 Project Planning (2.2)

15 The Respondents will plan the specific project scope after the Research Report is
16 completed. Project planning activities include those tasks described below such as identifying
17 data needs, developing a work plan, designing a data collection program and identifying health
18 and safety protocols. The Respondents will confer with EPA regarding activities described in the
19 subsections below and before the drafting of the scoping deliverables.

21 3.2.1 Refine and Document Preliminary Remedial Action Objectives and Alternatives (2.2.3)

22 EPA has identified preliminary remedial action objectives (RAOs) for the Site, which are
23 the goals for protecting human health and the environment. The RAOs specify contaminants and
24 media of concern, potential exposure pathways, and preliminary remediation goals. These RAOs
25 are relevant to the Site source areas and do not include RAOs for addressing the regional
26 groundwater for the Motorola 52nd Street Superfund Site OU3 study area. The preliminary
27 remediation goals can be either ARARs of other Federal and State environmental laws or risk-
28

1 based concentrations. Examples of Federal and State site characterization screening levels and
2 remedial action levels for various environmental media are provided in Attachment A for
3 reference and guidance in refining the investigation screening levels and RAO's for the Site. The
4 preliminary RAO's for the Site developed by EPA are listed below for the following human
5 health and ecological exposure pathways:
6

- 7 • **Surface Soils:** Prevent human ingestion and direct dermal contact with COCs in surface
8 soils that pose an excess carcinogenic risk greater than 10^{-6} or a noncarcinogenic hazard
9 index (HI) of greater than 1, a cumulative excess carcinogenic risk (all carcinogens) in
10 excess of 10^{-4} , or a cumulative HI (all noncarcinogens) greater than 1.
11
- 12 • **Ambient or Indoor Air:** Prevent human inhalation of COCs volatilizing from
13 subsurface soil to air that pose an excess carcinogenic risk greater than 10^{-6} or HI greater
14 than 1, a cumulative excess carcinogenic risk (all carcinogens) in excess of 10^{-4} , or a
15 cumulative HI (all noncarcinogens) greater than 1.
- 16 • **Groundwater:**
 - 17 1. **Soil Sources:** Prevent leaching of contaminants to groundwater aquifers that
18 would exceed any respective MCL, or a total carcinogenic risk in excess of 10^{-6} or
19 a cumulative HI greater than 1.
20
 - 21 2. **Groundwater Sources:** Prevent off-site migration of COC-contaminated
22 groundwater contaminated by the Site that would exceed any respective MCL, or
23 a total carcinogenic risk in excess of 10^{-6} or a cumulative HI greater than 1, or
24 depending on EPA and ADEQ evaluation, that would be above such levels
25 expected to be addressed by the Motorola 52nd Street Superfund Site OU3 study
26 area groundwater remedial action.
27
28

1 • **Ecological Receptors:**

- 2 1. Ensure ecological receptors important at the individual level of ecological
3 organization (listed threatened or endangered) do not reside in areas at the Site
4 where relevant hazard indices exceed 1.
5
6 2. Ensure existing contaminant conditions at the Site do not change so as to threaten
7 wildlife populations and vegetation communities.

8 The Respondents will review and, if necessary, refine the RAOs for each actually or
9 potentially COC-contaminated medium. The Respondents will also include objectives for the
10 use of institutional controls. The Respondents will then identify a preliminary range of broadly
11 defined potential remedial action alternatives, associated technologies, and institutional controls,
12 if necessary. The range of potential alternatives should encompass where appropriate,
13 alternatives in which treatment significantly reduces the toxicity, mobility, or volume of the
14 waste; alternatives that involve containment with little or no treatment; and a no-action
15 alternative. The Respondents should consider all presumptive site characterization and remedy
16 selection guidance available for sites contaminated with COCs. Respondents will document the
17 revised RAOs and alternatives in a Remedial Action Objectives Technical Memorandum and
18 submit this document to EPA within sixty (60) days of the Consent Order Effective Date.
19

20 3.2.2 Document the Need for Treatability Studies (2.2.4)

21 If remedial actions involving treatment for COCs have been identified by the
22 Respondents or EPA, treatability studies will be required except where the Respondents can
23 demonstrate to EPA's satisfaction that they are not needed. Where treatability studies are needed,
24 plans for initial treatability testing activities (such as research and study design) will be
25 submitted in the work plan described in Section 3.3.1 and planned to occur concurrently with site
26 characterization activities.
27
28

1 3.2.3 Begin Preliminary Identification of Potential ARARs (2.2.5)

2 The Respondents will conduct a preliminary identification of potential state and federal
3 ARARs (chemical-specific, location-specific and action-specific) to assist in the refinement of
4 RAOs, and the initial identification of remedial alternatives and ARARs associated with
5 particular actions. ARAR identification will continue as conditions, contaminants, and RAOs are
6 better defined. Respondents will indicate the initial results of this review in the Remedial Action
7 Objectives Technical Memorandum, and continue to revise in deliverables due throughout the
8 Focused RI/FS process.

10 3.3 Planning Deliverables (2.3)

11 At the conclusion of the project planning phase, the Respondents will submit an Focused
12 RI/FS Work Plan which includes a sampling and analysis plan and health and safety plan. These
13 planning documents must be approved by EPA prior to the initiation of field activities. These
14 deliverables are described in detail in the following subsections.

16 3.3.1 Focused RI/FS Work Plan (2.3.1)

17 Respondents will submit to EPA a Draft Focused Remedial Investigation/Feasibility
18 Study Work Plan ("WP") within thirty (30) days of EPA approval of the Research Report. The
19 WP will document the decisions and evaluations completed during the scoping process. The RI
20 and FS activities that the WP shall address are described in more detail in Sections 4.0 and 5.0.
21 The WP should be developed in conjunction with the sampling and analysis plan and the health
22 and safety plan, although each plan may be delivered under separate cover. The WP will include
23 a statement of the problem(s) and potential problem(s) posed by the Site and the objectives of the
24 Focused RI/FS, a comprehensive description of the work to be performed to meet those
25 objectives, including the methodologies to be utilized and the rationale for performing the
26 required activities, as well as a corresponding schedule for completion. Twenty-one (21) days
27
28

1 following comment by EPA, the Respondents will submit a Final WP, which satisfactorily
2 address EPA's comments.

3 The Respondents will include in the WP: a background summary setting forth the
4 description of the Site, including the geographic location, and to the extent possible, a description
5 of the Site physiography, hydrology, geology, demographics, ecological, cultural and natural
6 resource features; a synopsis of the Site history and a description of previous responses that have
7 been conducted at the Site by local, state, federal, or private parties; and a summary of the
8 existing data in terms of physical and chemical characteristics of the contaminants identified, and
9 their distribution among the environmental media at the Site. In addition, the Respondents will
10 include in the WP a description of the Site management strategy discussed with EPA during
11 scoping, a preliminary identification of remedial alternatives, data needs for evaluation of
12 remedial alternatives, a process for and manner of identifying Federal and State ARARs
13 (chemical-specific, location-specific and action-specific), and will reflect coordination with
14 treatability study requirements, if needed.

15 The Respondents will present in the WP a discussion of a preliminary conceptual site
16 model. The Respondents will identify any known or suspected sources of COC contamination,
17 types of contaminants and affected media, fate and transport of each contaminant in each
18 medium and any known or potential human or environmental receptors. The Respondents will
19 refine the conceptual site model as new data become available and present it in the Focused
20 Remedial Investigation Report (see Section 4.3). The conceptual site model will be based on the
21 research work completed during scoping, and include detailed descriptions of the configuration,
22 operation, and historical uses of the potential source areas, detailed maps depicting all existing
23 buildings and other features of interest, figures, and tables depicting the layout, locations, and
24 uses of features at the Site, and any recommendations for investigation of the areas.

1 The Respondents will also identify the current use of the Site in accordance with EPA's
2 "Land Use in CERCLA Remedy Selection Process," OSWER Directive No. 9355.7-04, May 25,
3 1995 (hereinafter the "Land Use Guidance"), including the use(s) of property located over any
4 ground water plume, if applicable, and will state the basis for these determinations. Information
5 regarding existing uses of the Site should also be gathered to assist in identifying the reasonably
6 anticipated future uses. If EPA determines it is appropriate, Respondents shall conduct a reuse
7 assessment in accordance with the Land Use Guidance and "Reuse Assessments: A Tool to
8 Implement the Superfund Land Use Directive," OSWER 9355.7-06P, June 4, 2001, to identify
9 the reasonably anticipated future use of the Site. Respondents shall document the reuse
10 assessment in the WP, if conducted.

11
12 Finally, the major part of the WP is a detailed description of the tasks to be performed,
13 information needed for each task, information to be produced during and at the conclusion of
14 each task, and a description of the work products that will be submitted to EPA. This includes
15 the deliverables set forth in the remainder of this statement of work; a schedule for each of the
16 required activities which is consistent with the RI/FS guidance; and a project management plan,
17 including a data management plan (e.g., requirements for project management systems and
18 software, minimum data requirements, data format and backup data management), and reports,
19 meetings and presentations to EPA at the conclusion of each major phase of the Focused RI/FS.
20 The Respondents will refer to Appendix B of the RI/FS Guidance for a comprehensive
21 description of the contents of the required WP.

22
23 Because of the unknown nature of the Site and iterative nature of the Focused RI/FS,
24 additional data requirements and analyses may be identified throughout the process. The
25 Respondents will submit a Technical Memorandum documenting the need for additional data
26 requirements to be identified at the request of EPA or as otherwise necessary within 20 days of
27
28

1 identification. Upon approval, Respondents will incorporate the Technical Memorandums into
2 the WP. The Respondents is responsible for fulfilling and identifying the Data Quality
3 Objectives (DQOs) described in the next section whenever such additional data and analysis
4 needs are identified by EPA consistent with the general scope and objectives of this Focused
5 RI/FS.
6

7 3.3.2 Sampling and Analysis Plan (2.3.2)

8 The Respondents will submit a sampling and analysis plan (SAP) within thirty (30) days
9 of EPA approval of the Research Report. The SAP is produced to ensure that sample collection
10 and analytical activities are conducted in accordance with technically acceptable protocols and
11 that the data meet DQOs. The SAP provides a mechanism for planning field activities and
12 consists of a field sampling plan (FSP) and a quality assurance project plan (QAPP).
13

14 In the FSP, the Respondents will define in detail the sampling and data-gathering
15 methods that will be used on the project. Respondents will include sampling objectives, sample
16 location and frequency, sampling equipment and procedures, and sample handling and analysis.
17 In the QAPP, Respondents will describe the project objectives and organization, functional
18 activities, and quality assurance and quality control (QA/QC) protocols that will be used to
19 achieve the desired DQOs. Respondents will prepare the QAPP in accordance with "Guidance
20 for Data Quality Objectives (DQOs) Process (QA/G-4)" (EPA/600/R-96/055, August 2000),
21 "EPA Requirements for Quality Assurance Project Plans (QA/R-5)" (EPA/240/B-01/003, March
22 2001), and "Guidance for Quality Assurance Project Plans (QA/G-5)" (EPA/240/R-02/009,
23 December 2002). In addition, Respondents will address in the QAPP sampling procedures,
24 sample custody, analytical procedures, and data reduction, validation, reporting and personnel
25 qualifications.
26
27

28 The Respondents will demonstrate to EPA's satisfaction that each laboratory it may use is

1 qualified to conduct the proposed work. The Respondents will only use laboratories that have a
2 documented Quality Assurance Program that complies with EPA and State requirements. The
3 laboratory QA program must be submitted to EPA. This includes use of methods and analytical
4 protocols for the COCs in the media of interest within detection and quantification limits
5 consistent with both QA/QC procedures and DQOs approved in the QAPP for the Site by EPA.
6 EPA may require that the Respondents submit detailed information to demonstrate that the
7 laboratory is qualified to conduct the work, including information on personnel qualifications,
8 equipment and material specifications. EPA will document the request in written correspondence
9 to the Respondents and will provide the Respondents 30 days to fulfill the request. The
10 Respondents will provide assurances that EPA has access to laboratory personnel, equipment and
11 records, sample collection, transportation and analysis. Finally, laboratories must provide data
12 according to "Laboratory Documentation Requirements for Data Validation Packages", July
13 1997 (EPA 9QA-07-97) or other equivalent documentation as determined by EPA.
14

15 3.3.3 Site Health and Safety Plan (2.3.3)

16 The Respondents will submit a health and safety plan (HASP) within thirty (30) days of
17 EPA approval of the Research Report prepared in conformance with the health and safety
18 program of the Respondents, and in compliance with Occupational Safety and Health
19 Administration (OSHA) regulations and protocols. The HASP will include the 11 elements
20 described in the RI/FS Guidance, such as a health and safety risk analysis, a description of
21 monitoring and personnel protective equipment, medical monitoring, and site control. It should
22 be noted that EPA does not "approve" the HASP, but rather EPA reviews it to ensure that all
23 necessary elements are included, and that the plan provides for the protection of human health
24 and the environment.
25

26 3.4 Community Involvement

1 The development and implementation of community involvement activities for the
2 Focused RI/FS are the responsibility of EPA. The critical community involvement planning
3 steps performed by EPA include conducting community interviews and developing a Focused
4 community involvement plan (CIP). Although implementation of the CIP is the responsibility of
5 EPA, the Respondents will be allowed to review and provide content and comment for
6 information regarding the Site history, participating in public meetings, or by preparing fact
7 sheets for distribution to the general public. The extent of Respondents' involvement in
8 community involvement activities relative to the content and implementation of the CIP is left to
9 the discretion of EPA. Community involvement activities conducted by Respondents relative to
10 the Respondents' Work conducted at the Site will be subject to oversight by EPA. Nothing
11 herein shall preclude Respondents from conducting community relations activities pertaining to
12 the Site.
13

14 4.0 REMEDIAL INVESTIGATION (RI/FS Guidance, Chapter 3)

15 During this phase of the Focused RI/FS, the Respondents will begin to implement the
16 approved WP and SAP. The RI activities will include performance of the field activities
17 described in the subsections below including preparation and submission of a Focused Remedial
18 Investigation Report (FRIR) (see Section 4.3). The overall objective of this phase is to collect
19 data to describe the COC source areas at the Site that may pose a threat to human health or the
20 environment. This is accomplished by first determining the physiography, geology, and
21 hydrology at the Site. The Respondents will identify the sources of COC contamination and
22 define the nature, extent, and volume of the sources of contamination, including their physical
23 and chemical constituents as well as their concentrations at incremental locations to background
24 in the affected media. The Respondents will also investigate the extent of migration of COC
25 contamination, including surface and subsurface pathways of migration, as well as its volume
26
27
28

1 and any changes in its physical or chemical characteristics, to provide for a comprehensive
2 understanding of the nature and extent of COC contamination at the Site. Using this information,
3 contaminant fate and transport is then determined and projected. A focused risk assessment is
4 then conducted considering the chemical concentrations detected and/or projected in the
5 subsurface.
6

7 The Respondents will collect and analyze field data to provide the information required to
8 accomplish the objectives of the study. In view of the unknown Site conditions, activities are
9 often iterative, and to satisfy the objectives of the Focused RI/FS it may be necessary for the
10 Respondents to supplement the work specified in the initial WP. As described in Section 3.3.1
11 this may be done through submission of Technical Memorandums either initiated by the
12 Respondents or requested by EPA.
13

14 4.1 Field Investigation (3.2)

15 The field investigation includes the gathering of data to define site physical and
16 biological characteristics, sources of contamination, and the nature and extent of contamination
17 at the Site. The Respondents will perform these activities in accordance with the WP, SAP, and
18 HASP. The Respondents will notify EPA with a Notification of Initiation of Field Work (FW) at
19 least fifteen (15) days prior to initiating any physical work in the field. The Notification will
20 include the planned dates for field activities so that EPA may adequately schedule oversight
21 tasks. The Respondents will notify EPA in writing within five (5) days of completion of field
22 work activities, with a Notification of Completion of Field Work. Upon submission of the
23 Notification of Field Work, Respondents will provide Weekly Progress Reports according to the
24 requirements in the Consent Order. Weekly Progress Reports may be discontinued upon
25 Notification of Completion of Field Work (see Section 4.1).
26
27
28

4.1.1 Field Support Activities (3.2.1)

The Respondents will initiate field support activities prior to initiation of physical work in the field. Some activities may occur following the approval of the WP and SAP as well as after initiation of physical work and will be implemented according to the schedule in the WP. Field support activities may include obtaining access to the Site, scheduling, procuring equipment, office space, laboratory services, and/or contractors. Field work activities may include field lay out of the sampling grid, initiating sampling, installation and calibration of equipment, initiation of analysis, etc. Respondents will document these types of activities in the Monthly or Weekly Progress Reports, as appropriate, according to the requirements in the Consent Order.

4.1.2 Physical and Biological Characteristics (3.2.2)

The Respondents will collect data on the physical and biological characteristics of the Site and surrounding areas including the physiography, geology, and hydrology, and specific physical characteristics identified in the WP. The Respondents will ascertain this information through a combination of physical measurements, observations, and sampling efforts and the Respondents will utilize the information to define potential transport pathways and human and ecological receptor populations. In defining the Site physical characteristics, the Respondents will also obtain sufficient engineering data for the projection of contaminant fate and transport, and development and screening of remedial action alternatives, including information to assess treatment technologies.

4.1.3 Sources of Contamination (3.2.3)

The Respondents will locate each source of COC contamination. For each location, the areal extent and depth of contamination will be determined by sampling at incremental depths on a sampling grid, or appropriately targeted locations based on the conceptual site model (CSM)

1 developed in the Research Report and WP, and refined throughout the RI. Respondents will
2 determine the physical characteristics and chemical constituents and their concentrations for all
3 known and discovered sources of COC contamination. The Respondents will conduct sufficient
4 sampling to define the boundaries of the contaminant sources to the level established in the
5 QAPP and DQOs.

7 In defining the source of COC contamination Respondents will analyze the potential for
8 COC release (e.g., long term leaching from soil), contaminant mobility and persistence, and
9 characteristics important for evaluating remedial actions, including information to assess
10 treatment technologies.

11 4.1.4 Nature and Extent of Contamination (3.2.4)

13 As a final step during the field investigation, the Respondents will gather information to
14 be able to describe the nature and extent of COC contamination in the FRIR. To describe the
15 nature and extent of COC contamination, the Respondents will utilize the information on site
16 physical and biological characteristics and sources of contamination to give a preliminary
17 estimate of the COCs that may have migrated. The Respondents will then implement an iterative
18 monitoring program and any study program identified in the WP or SAP such that by using
19 analytical techniques sufficient to detect and quantify the concentration of contaminants, the
20 migration of COCs through the various media at the Site can be determined.

22 In addition, the Respondents will gather data for calculations of COC fate and transport.
23 This process is continued until the area and depth of COC contamination are known to the level
24 of contamination established in the QAPP and DQOs. The Respondents will use the information
25 on the nature and extent of COC contamination to determine the level of risk presented by the
26 Site, and determine aspects of the appropriate remedial action alternatives to be evaluated.

28 4.2 Data Analyses/Evaluate Site Characteristics (3.4.1)

1 The Respondents will analyze and evaluate the data in order to be able to describe in the
2 FRIR: (1) site physical and biological characteristics, (2) contaminant source characteristics, (3)
3 nature and extent of contamination (4) contaminant fate and transport, and (5) risks to human
4 health and the environment. These elements are described in the subsections below:

6 4.2.1 Site Characteristics (3.4.1)

7 The Respondents will utilize the results of the site physical characteristics, source
8 characteristics, and extent of COC contamination analyses in the analysis of contaminant fate and
9 transport. The evaluation will include the actual and potential magnitude of releases from the
10 sources, and horizontal and vertical spread of COC contamination as well as mobility and
11 persistence of contaminants.

12
13 Where modeling is appropriate, Respondents will identify such models to EPA in the
14 Focused RI/FS WP and if necessary, as supplemented by a Technical Memorandum. All data
15 and programming, including any proprietary programs, will be made available to EPA together
16 with a sensitivity analysis. The Respondents will agree to discuss and then collect any data gaps
17 identified by the EPA that are needed to complete the RA. (See "Guidance for Data Useability in
18 Risk Assessment - OSWER Directive #9285.7-05, October 1990.)

19
20 Also, Respondents will provide in this evaluation any information relevant to site
21 characteristics necessary for evaluation of the need for remedial action in the RA and for the
22 development and a evaluation of remedial alternatives. Analyses of data collected for site
23 characterization will meet the DQOs developed in the QAPP stated in the SAP (or revised during
24 the RI).

25 4.2.2 Risk Assessment (3.4.2)

26 Respondents will submit a Focused RA in the FRIR and evaluate baseline COC
27 conditions as developed through the field investigations and data analysis. In the assessment,
28

1 Respondents will consider both current and possible future uses of the Site. The RA will identify
2 possible exposure pathways, evaluate COC fate and transport, and if necessary, estimate points
3 of exposure and characterize health risks. Respondents will base exposure scenarios on land and
4 groundwater use assumptions that will be developed in collaboration with the EPA.

6 4.2.3 Data Management Procedures (3.5)

7 The Respondents will consistently document the quality and validity of field and
8 laboratory data compiled during the RI according to the procedures established in the WP. The
9 following subsections describe the data management procedures expected throughout the
10 Focused RI/FS:

11 4.2.3.1 Document Field Activities (3.5.1)

12 The Respondents will ensure that all information gathered during site characterization
13 will be consistently documented and adequately recorded by the Respondents in well maintained
14 field logs and laboratory reports. The method(s) of documentation must be specified in the WP
15 and/or the SAP. Field logs must be utilized to document observations, measurements, and
16 significant events that have occurred during field activities. Laboratory reports must document
17 sample custody, analytical responsibility, analytical results, adherence to prescribed protocols,
18 nonconformity events, corrective measures, and/or data deficiencies. Ultimately, these
19 documents will be compiled and submitted to EPA as appendices to the FRIR; however, they
20 may be requested by EPA throughout performance of the RI activities and/or in the Weekly
21 Progress Reports.

24 4.2.3.2 Sample Management and Tracking (3.5.2; 3.5.3)

25 The Respondents will maintain field reports, sample shipment records, analytical results,
26 and QA/QC reports to ensure that only validated analytical data are reported and utilized in the
27 development and evaluation of remedial alternatives. Analytical results developed under the WP
28

1 will not be included in any site characterization reports unless accompanied by or
2 cross-referenced to the corresponding QA/QC report.

3 In addition, the Respondents will establish a data security system to safeguard chain-of-
4 custody forms and other project records to prevent loss, damage, or alteration of project
5 documentation.
6

7 4.2.3.3 Database Management

8 If groundwater data is collected, the Respondents will maintain this data in an electronic
9 database, the Respondents will comply with the most recent Arizona Department of
10 Environmental Quality Groundwater Data Submittal Guidance Document, currently Version 3.1,
11 dated December 2003, and any additional requirements EPA deems necessary.
12

13 4.3 Focused Remedial Investigation Report (3.7.3)

14 The Respondents will submit a Draft Focused Remedial Investigation Report (FRIR) to
15 EPA within 60 days of Notification of Completion of Fieldwork. In the FRIR Respondents will
16 review and summarize results of activities conducted in the previous subsections to characterize
17 and assess the risks to human health and the environment at the Site. Respondents will include
18 an updated of the site conceptual model and will evaluate the risks to human health and the
19 environment through a RA. For example, the FRIR will describe and display site data
20 documenting the location and characteristics of surface and subsurface features and
21 contamination at the Site, such as sources of COC contamination, nature and extent of COC
22 contamination and the fate and transport of COCs. The Respondents will refer to the RI/FS
23 Guidance for an outline of the FRIR format and contents. Twenty-one (21) days following
24 comment by EPA, the Respondents will submit a Final FRIR which satisfactorily address EPA's
25 comments.
26

27 5.0 FEASIBILITY STUDY (RI/FS Guidance, Chapter 4) 28

1 If EPA determines that the results of the FRIR identify risks from COC contamination to
2 human health and/or the environment, the Respondents will conduct an evaluation of the
3 remedial alternatives that will address those risks and complete a Focused Feasibility Study
4 (FFS) for EPA to use in determining the remedy for the Site. The following activities detail the
5 FFS process:
6

7 5.1 Development and Screening of Remedial Alternatives (4.2)

8 The Respondents will develop and evaluate a range of appropriate waste management
9 options that at a minimum ensure protection of human health and the environment, concurrent
10 with the RI site characterization task. This range of alternatives should include as appropriate,
11 options in which treatment is used to reduce the toxicity, mobility, or volume of wastes, but
12 varying in the types of treatment, the amount treated, and the manner in which long-term
13 residuals or untreated wastes are managed; options involving containment with little or no
14 treatment; options involving both treatment and containment; and a no-action
15 alternative. Respondents should consider guidance related to presumptive remedies for COCs in
16 soils. The results of this will provide a basis for completion of the next subtask.
17

18 5.2 Detailed Analysis of Remedial Alternatives (RI/FS Guidance, Chapter 6)

19 The Respondents will conduct a detailed analysis of the remedial alternatives screened in
20 the previous subtask. The detailed analysis will consist of an analysis of each option against the
21 set of nine evaluation criteria and a comparative analysis of all options using the same evaluation
22 criteria as a basis for comparison: (1) overall protection of human health and the environment;
23 (2) compliance with ARARS; (3) long-term effectiveness and permanence; (4) reduction of
24 toxicity, mobility, or volume; (5) short-term effectiveness; (6) implementability; (7) cost; (8)
25 state (or support agency) acceptance; and (9) community acceptance. Criteria 8 and 9 may be
26 considered after the FFS Report has been released to the general public. If any of the retained
27
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1 remedial alternatives includes institutional controls which require state or community
2 participation to implement, monitor, or enforce, then state and community acceptance must be
3 determined prior to public release of the FFS Report. This analysis is the final task to be
4 performed by the Respondents during the FFS, and will be submitted as part of the Final FFS
5 Report.
6

7 5.3 Focused Feasibility Study Report (6.5)

8 The Respondents will submit a Draft FFS Report (FFSR) to EPA within sixty (60) days
9 of EPA approval of the FRIR. This FFSR, as ultimately adopted or amended by EPA, provides a
10 basis for remedy selection by EPA and documents the development and analysis of remedial
11 alternatives. The Respondents will refer to the RI/FS Guidance for an outline of the FFSR
12 format and the required report content. The Respondents will submit a Final FFSR within
13 twenty-one (21) Days of EPA comments. Once EPA's comments are addressed by the
14 Respondents to EPA's satisfaction, the Final FFSR may be bound with the FRIR.
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----- ATTACHMENT A -----
CONTAMINANTS OF CONCERN (COC'S)
Potential Site Characterization Screening Levels and Remedial Action Levels

Data Sources: 1EPA Region 9 PRGs Table, 10/01/02 2ADHS 1999 Update AAAQGs, 5/11/99 3ADHS Draft Arizona Ambient Air HGBLs, 5/11/99 4EPA Draft Subsurface Vapor Intrusion Guidance, Table 2c, 11/29/02 5ADEQ A Screening Method to Determine Soil Concentrations Protective of Groundwater Quality, 09/96 ----- Chemical Name	Air (µg/m³)			Soil (mg/kg)				Soil Gas (µg/m³)	Groundwater (µg/L)				
	Direct Contact Exposure Pathways						Migration to Groundwater		Migration to Indoor Air (Vapor Intrusion)	Direct Contact Exposure Pathway		2002 Max. Detections	
	Annual 30 yr.	Annual 70 yr.-24 Hour		Residential. - Non Res.									
	EPA PRG¹	AAAQGs Annual-24 Hour²	ADHS HGBLs³	EPA PRGs¹	ADEQ SRLs	EPA SSLs DAF 1-20¹	ADEQ GPLs¹	EPA SSLs¹ AF 0.1; 1x10⁻⁶ risk	EPA PRG¹ (Tap Water)	EPA MCL/ ADEQ AWQS	OU2 Area	OU3 Area	
Chloroethane/Ethyl Chloride (CA)	2.3	N/A	4300-43000	3.0 - 6.5	1100-4200	N/A	N/A	100000	4.6	N/A	160	NS	
1,1-Dichloroethane (1,1-DCA)	520	N/A-3200	210-2100	510-1700	500-1700	1-23	N/A	5000	810	N/A	110	50	
1,2-Dichloroethane (1,2-DCA)	0.074	0.038-14	0.73-43	0.28 - 0.60	2.5-5.5	0.001-0.02	0.21	0.94	0.12	5	ND	0.6	
1,1-Dichloroethylene (1,1-DCE)	210	N/A-63	0.38-140	120 - 410	0.36-0.8	0.003-0.06	0.81	2000	340	7	130	60	
cis-1,2-Dichloroethylene (cis-1,2-DCE)	37	N/A-6300	15-150	43-150	31-100	0.02-0.4	4.9	N/A	61	70	220	150	
trans-1,2-Dichloroethylene (trans-1,2-DCE)	73		30-300	69-230	78-270	0.03-0.7	8.4	N/A	120	100	1.4	3	
Tetrachloroethylene (PCE)	0.67	1.7-640	15-150	1.5-3.4	53-170	0.003-0.06	1.3	8.1	0.66	5	15	19	
1,1,1-Trichloroethane (1,1,1-TCA)	2300	N/A-15000	430-4300	1200	1200-4800	0.1-2	1.0	22000	3200	200	2.4	ND	
1,1,2-Trichloroethane (1,1,2-TCA)	0.12	0.062-23	1.2-60	0.73-1.6	6.5-15	0.0009-0.02	N/A	1.5	0.2	5	ND	ND	
Trichloroethene (TCE)	0.017	0.58-210	9-90	0.053-0.11	27-70	0.003 - 0.06	0.61	22	0.028	5	650	720	
Vinyl Chloride/Chloroethene (CE)	0.11	0.012-4.3	0.02-N/A	0.079-0.75	0.016-0.035	0.0007-0.01	N/A	2.8	0.02	2	16	0.3	
1,4-Dioxane	0.61	N/A-710	6-N/A	44-160	400-1700	N/A	N/A	N/A	6.1	N/A	11	12	

List of Acronyms:

EPA = EPA Region 9
 AAAQGs = Arizona Ambient Air Quality Guidelines
 SSL = Soil Screening Levels
 AF = Soil Gas to Indoor Air Attenuation Factor
 AWQS = AAC Aquifer Water Quality Standards

ADEQ = Arizona Department of Quality
 PRG = Preliminary Remediation Goal
 GPL = Groundwater Protection Levels
 MCL = National Primary Drinking Water Standards Maximum Contaminant Level
 N/A = Not Available

ADHS = Arizona Department of Health Services
 SRL = Soil Remediation Levels, Arizona Administrative Code (AAC) Title 18, Ch. 7 Appendix A
 DAF = Dilution Attenuation Factor
 ND = Non Detect
 NS = Not Sampled

-----ATTACHMENT B-----

SUMMARY OF DELIVERABLES

SOW Section	Submittals and Deliverables	Due Date
2.0	Monthly Progress Reports per paragraph 44 in AOC	The 5 th business day of each month for the preceding month after ED
3.1.3	Research Report (RR)	60 days after ED
3.2.1	Remedial Action Objectives Technical Memorandum (RAOTM)	60 days after ED
3.3.1	Draft Focused RI/FS Work Plan (WP)*	30 days after EPA approval of RR
3.3.1	Technical Memorandums (to supplement WP)	Within 20 days as identified or requested
3.3.2	Draft Sampling and Analysis Plan (SAP)*	30 days after EPA approval of RR
3.3.3	Draft Site Health and Safety Plan (HASP)*	30 days after EPA approval of RR
4.1	Notification of Initiation of Field Work (FW)	15 days in advance
4.1	Weekly Progress Reports per paragraph 44 of AOC	Each week on Thursday during FW
4.1	Notification of Completion of Field Work (FW)	5 days after completion of FW
4.3	Draft Focused Remedial Investigation Report (FRIR)*	60 days after completion of FW
5.3	Draft Focused Feasibility Study Report (FFSR)*	60 days after approval of Final FRIR
3.3.1 4.3 5.3	*Final Deliverables	21 days after receipt of EPA comment

----- ATTACHMENT C-----

REFERENCES

The following list, although not comprehensive, comprises many of the regulations and guidance documents that apply to the RI/FS process:

"The National Oil and Hazardous Substances Pollution Contingency Plan" Final Rule, Federal Register 40 CFR Part 300, March 8, 1990.

"Guidance for Conducting Remedial Investigations and Feasibility Studies Under CERCLA," U.S. EPA, Office of Emergency and Remedial Response, Interim Final, OSWER Directive No. 9355.3-01, EPA-540-G-89-004, October 1988.

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19 "CERCLA Compliance with Other Laws Manual (draft)," Two Volumes, U.S. EPA, Office of
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21 "NEIC Policies and Procedures Manual, " EPA-330-9-78-001-R, May 1978, revised August
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23 "Permits and Permit "Equivalency" Processes for CERCLA On-site Response Actions," U.S.
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U.S. EPA, Office of Emergency and Remedial Response, OSWER Directive No. 9283.1-2.

"Presumptive Remedies: Site Characterization and Technology Selection For CERCLA Sites
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Response, OSWER Directive No. 93550.0-48FS, EPA 540-F-93-048, September 1993.

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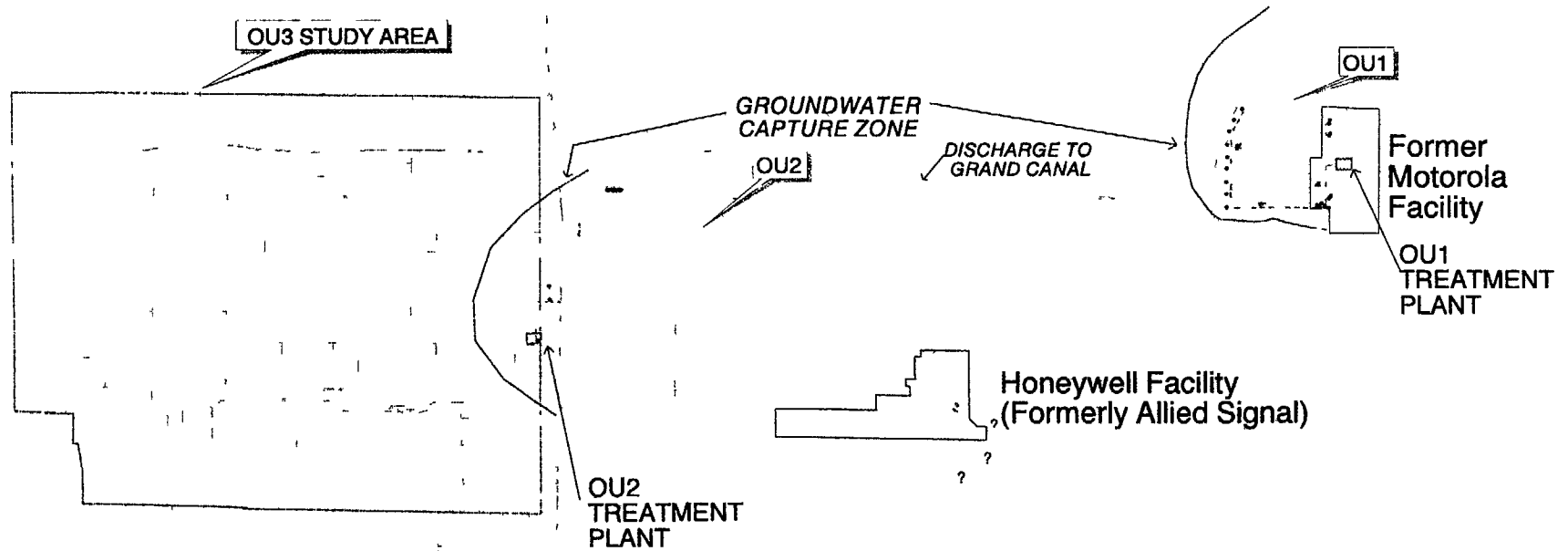
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APPENDIX B



Estimated Site Boundary
 Contour represents area of volatile organic compounds in alluvial groundwater that exceed the Aquifer Water Quality Standards

Dashed Line Indicates Inferred Site Boundary

Quoted Where Uncertain

Groundwater Extraction Well

Treatment System Pipeline

Roads

Canals

1000 0 1000 2000 3000 4000 5000 Feet



MOTOROLA 52ND ST SUPERFUND SITE
 FEBRUARY, 2003
 PHOENIX, ARIZONA

PREP NLC
 REV

FILE

Water Quality Source Data September 2002

Consent Order
APS Site
Docket No. 2004-25

Appendix C

Dear [R.A. for EPA Region 9]:

I am the [chief financial officer] of [name and address of firm]. This letter is in support of this firm's use of the financial test to demonstrate financial assurance for its Work obligations as defined in that certain Administrative Order on Consent for Focused Remedial Investigation and Feasibility Study, U.S. EPA Region 9, CERCLA Docket No. 2004-XX ("Consent Order"). The Consent Order requires this firm to post financial assurance in an amount equal to [the amount of the Work required by the Consent Order] \$XXXXXX ("FA Amount").

I hereby certify to the U.S. Environmental Protection Agency, based on this firm's independently audited, year-end financial statements for its latest completed fiscal year, ended [date], that:
[either 1 or 2; not both]

(1) (A) The firm meets two of the following three ratios: a ratio of total liabilities to net worth less than 2.0; a ratio of the sum of net income plus depreciation, depletion, and amortization to total liabilities greater than 0.1; and a ratio of current assets to current liabilities greater than 1.5; and

(B) The firm possesses net working capital and tangible net worth each at least six times the FA Amount; and

(C) The firm possesses tangible net worth of at least \$10 million; and

(D) The firm owns assets located in the United States amounting to at least 90 percent of its total assets or at least six times the FA Amount.

-OR-

(2) (A) The firm has a current rating for its most recent [long-term debt] issuance of AAA, AA, A, or BBB as issued by Standard and Poor's or Aaa, Aa, A, or Baa as issued by Moody's; and

(B) The firm possesses tangible net worth at least six times the FA Amount; and

(C) The firm possesses tangible net worth of at least \$10 million; and

(D) The firm owns assets located in the United States amounting to at least 90 percent of its total assets or at least six times the FA Amount.

Sincerely,
[Name]
[Title]
[Company]